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June 8, 2009

VIA MESSENGER

Thomas J. Krueger, Esq.
Associate Regional Counsel
U.S. EPA Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3590

Re: Ellsworth Industrial Park Site -- Downers Grove Sanitary District

Dear Tom:

As you and I have discussed recently, I am forwarding to you a copy of a report dated March 2007, generated by Mr. Jim Huff, of Huff & Huff, Inc., on behalf of my client, Downers Grove Sanitary District ("DGSD"). I can also provide a copy of the report in electronic format if you find that more convenient.

As you know, in 2002, U.S. EPA identified the former sludge lagoons on the DGSD facility at the Ellsworth Industrial Park as a potential contamination source, based on a single groundwater result from a well identified as BD-4(I) that contained trichloroethene at 0.0092 mg/L. Subsequent testing performed by Huff & Huff on behalf of DGSD, which was provided to U.S. EPA, showed that the sludge lagoons are not a source of the contamination in the groundwater at the Ellsworth Industrial Park. Rather, such testing revealed that the actual source of the contamination was a groundwater plume originating from property to the east of the sludge lagoons. This conclusion was supported by later work performed by U.S. EPA's contractor, Weston Solutions, Inc.

The March 2007 Huff & Huff report does not contain any new data; rather, that report was generated in support of DGSD's motion for summary judgment in the *People v. Precision Brands, et al.*, case in DuPage County Circuit Court. That case has been resolved with respect to DGSD. I thought that this report would be helpful to U.S. EPA in making its final expected evaluation of DGSD's status at the Ellsworth Industrial Park, as the Huff report summarizes all of the data available at that time. The report concludes that, because a 'contaminant-free zone' of soil exists beneath the former sludge lagoons and the groundwater contamination many feet below the surface, the DGSD lagoons are not a source of groundwater contamination in the area.

As you know, the erroneous identification has caused DGSD to incur significant legal and consulting costs over the years. As you have indicated in the many conversations with representatives of my firm and the DGSD, U.S. EPA needed to wait until the comprehensive testing anticipated as part of the final RI/FS was completed before U.S. EPA would be in a position to evaluate DGSD's status as a PRP at the Ellsworth Industrial Park. Now that such testing has been completed, and the results appear consistent with DGSD's long-held position that it is not responsible for groundwater contamination in the area, I am very hopeful that we can resolve DGSD's position with respect to U.S. EPA with finality.

Please let me know when we can discuss these issues in further detail after you have had a chance to review the March 2007 Huff report.

Very truly yours,

Lawrence W. Falbe

Enclosure

cc: Mr. Larry Cox
Roy Harsch, Esq.

CH01/ 25350473.1

Dowers Grove Sanitary District

Expert Opinion
of
James E. Huff, P.E.
Vice President
Huff & Huff, Inc.

March 2007

James E. Huff, P.E.

EXPERT OPINION
of
JAMES E. HUFF, P.E.

I am James E. Huff, Vice President and part owner of the environmental engineering firm Huff & Huff, Inc. My resume is included in Appendix A, including education, job experience, licenses, organizational history, and publications. Among other relevant experience, I have worked on municipal wastewater treatment plant projects since 1980 and on chlorinated solvent contamination sites since 1986. I am currently project manager for a large chlorinated solvent remediation project in Ohio that has contaminated the aquifer to over 100 feet below ground surface with extensive free product and soil contamination present. In addition, I am the project manager for applying a NASA technology, for which Huff & Huff holds a license from NASA, Emulsified Zero-Valent Iron (EZVI), for remediating chlorinated solvent sites.

EXECUTIVE SUMMARY

The Downers Grove Sanitary District (District) is located in the northwest corner of Ellsworth Industrial Park (EIP), at 5003 Walnut and 2710 Curtiss Street. The EIP was developed in the late 1950s and currently has 135 businesses (Weston, 2006). An initial investigation by the Illinois EPA throughout EIP in 2001 was conducted in response to citizen concerns about private well water quality.

One soil sample and one groundwater obtained by IEPA located just north of two digested sludge lagoons (GP-13 soil at 10 feet below ground surface and groundwater 40-44 ft below ground surface) on the District's property revealed no contaminants (Weston Solutions, 2002).[1] U.S. EPA subsequently assumed responsibility for the EIP investigation, and it collected extensive soil and groundwater samples throughout the entire industrial park. A soil boring (BD-4) immediately southwest of the same sludge lagoon had two soil samples analyzed, one at 15 to 17.5 ft and one at 37.5 to 40 ft below ground surface. Both soil samples were void of contaminants. However a monitoring well installed at the same location and screened between a depth of 47 to 57 ft below ground surface contained 0.009 mg/L trichloroethylene (TCE), about twice the drinking water standard of 0.005 mg/L. Based on this lone groundwater result, U.S. EPA identified the District as a Potentially Responsible Party (PRP) associated with the EIP Superfund site on August 1, 2002 along with eight other entities located in the EIP. (See Appendix G.) U.S. EPA's testing found widespread contaminants within the bedrock aquifer underlying nearly all of the EIP. Later testing caused U.S. EPA to add additional PRPs.

Through extensive testing, the following volatile organic compounds have been routinely found across the industrial park, and can be classified as the Contaminants of Concern (COCs): 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethylene (1,1-DCE), chloroethane, perchloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), and vinyl chloride.

[1] The soil sample contained 0.015 mg/kg acetone and an estimated 0.003 mg/kg methylene chloride both common laboratory contaminants and not contaminants of concern. The groundwater was reported to contain 0.0003 mg/L toluene, also not a contaminant of concern.

The District has never used or stored chlorinated solvents (DGSD, 2005, Appendix B), and the District has had an ordinance since 1958 prohibiting the discharge of industrial wastewater to its sewers (DGSD, 2005, Appendix B).

In order to determine if the District could be a contributing source to the regional groundwater contamination, soil and sludge samples from the Downers Grove Sanitary District property have been collected by the Illinois EPA, U.S. EPA, Huff & Huff on two separate occasions, and Weaver Boos Consultants.[2] Figure 1 is a three-dimensional representation of the sludge lagoons, the monitoring wells, and soil borings that have been conducted on the property and adjoining property. Figures 2A and 2B are two-dimensional cross-sections of the extensive network of monitoring wells and soil borings conducted, depicting the relative groundwater sample depths.

A total of 86 soil analyses have been completed in, below, and around the former sludge lagoons, and not a single COC has been detected. **Clearly if the District was a source of the groundwater contamination, the chlorinated solvents would have been found within, below, or adjacent to the sludge lagoons. As reflected in Figure 3, this is <u>not</u> the case. Instead, there exists a contaminant-free zone between and including the sludge lagoons and the regional groundwater contamination.**

Figures 2A and 2B present the COCs detected in the monitoring wells, averaging all results between 2002 and 2006.[3] Figure 4 depicts a summary of the groundwater results again in three-dimensions. The groundwater samples immediately beneath the sludge lagoons (WBS-1 and WBS-2) were totally void of COCs, within this contaminant-free zone. The wells north of the lagoons have also been void of COCs. The wells south of the sludge lagoon reflect the regional groundwater contamination, with the highest concentrations in the southeast corner of the property in monitoring well DG-3(I).

<u>OPINIONS</u>

<u>Opinion #1:</u> On the basis of the extensive soil data generated on The Downers Grove Sanitary District's (District's) property located at 5003 Walnut and 2710 Curtiss Street, the District is not a source of chlorinated groundwater contamination associated with the Ellsworth Industrial Park.

The sludge within the lagoons, the soil beneath, and soil surrounding the lagoons have been extensively tested by the Illinois EPA, U.S. EPA, Huff & Huff, Inc. on two occasions, and by Weaver Boos Consultants. No COCs were detected in any of these sludge and soil samples. It is my opinion, to a high degree of scientific certainty, that if the sludge lagoons were a source of the regional groundwater problem, a source would have been found from this extensive testing. Instead a 25-foot vertical contaminant-free zone exists beneath the sludge lagoons.

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[2] Weaver Boos Consultants was retained by several PRPs within EIP that are involved with the various cases for the purpose of further investigating the District's property and other possible sources.

[3] Identified laboratory and/or trip blank results were not included in the results. Where lower detection levels were achieved that show a detect, this value is reflected in Figures 2 and 4.

Thus, a review of the soil and groundwater results from the District's property make it clear that the source of contamination found in some deeper monitoring wells is attributed to the migration of contaminants within the regional groundwater migrating onto the District property, and not due to any source on the District Property.

<u>Opinion #2:</u> No other environmental professional who has evaluated the data generated on the District's property has identified the District as a source.

I have reviewed the expert reports prepared in the *Muniz* matter (No. 04 C 2405 in the U.S. District Court, Northern District of Illinois, Eastern Division), and not one expert presented any data indicating the District as a source to the regional groundwater problem.

Dr. Philip Bennett, retained by the Plaintiffs in the *Muniz* case, identified, based on his review of the data collected, eight properties that have caused contamination of the bedrock aquifer, and the District property was not one of these eight. (Bennett, 2005.) Dr. Donald Siegel, also retained by the Plaintiffs in the same matter, testified at his deposition that he agreed with Dr. Bennett that the District was not a source of groundwater contamination in the EIP. (Siegel, 2006.)

Other professionals have reviewed much of the same data as presented herein, and reached a similar conclusion. Bob Kay, Geologist for U.S. EPA, after reviewing the soil boring and sludge testing results reported to the U.S. EPA Remedial Project Manager, Ross del Rosario, as follows:

> Assuming there has been no excavation of sludge material in the past, the fact that essentially nothing was detected in the sludge and soil during the current and previous investigations indicates these sludge drying beds are not a source of groundwater contamination (Kay, B., Feb 23, 2005, Appendix C).

U.S. EPA's 2006 Preliminary Planning Report, using the Illinois Tier 1 Remedial Objectives codified in 35 Ill Adm Code 742 did not identify the District's property on its list of potential sources, either from its list of "Primary Study Areas", "Secondary Study Areas" or "Other Study Areas". In essence, the U.S. EPA is satisfied that sufficient data have been collected on the District's property to drop the District from further consideration.

<u>BACKGROUND</u>

The District purchased the existing property depicted in Figure 1 over a period from 1954 through 1999 (Cox, L., 2001, Appendix D). The current wastewater treatment plant, which provides primary, secondary, and tertiary treatment, is located at 5003 Walnut Avenue and 2710 Curtiss Street. In the 1951 aerial photograph, the property appears to be farmed. St. Josephs Creek has a large oxbow present on the property east of the future sludge lagoons. The 1961 aerial shows the initial treatment plant north of St. Joseph's Creek; however, the sludge lagoons are not present. The trees along the oxbow portion appear to be more mature than in the 1951 aerial. The sludge lagoons are present in the 1975 aerial and an expansion of the treatment plant north of St. Joseph's Creek appears to be underway. The 1975 aerial depicts the channelized creek east of the sludge lagoons, and the clearing of the trees along the Creek. The large oxbow on St. Joseph's Creek has been completely filled in and the creek bed straightened. The 1975 aerial depicts the larger treatment plant located north of St. Joseph's Creek, and the sludge lagoons remain visible. The 1986 aerial is similar to the 1975 aerial, with no construction activity east of the sludge lagoons. The neighboring industrial property to the east, Dyna-Gear, was built after 1986, over the former oxbow property. The 1993 aerial depicts the Dyna-Gear property. Copies of the historical aerial photographs are contained in Appendix R.

The sludge lagoons were used from somewhere in the early 1970s (1971 aerial) until 1997 (L. Cox, 2004, Appendix E). Since at least 1997, there has been no further sludge addition or removal activity in the two sludge lagoons. The lagoons were used for drying digested sludge. The District has never used or stored chlorinated solvents on its property (District, 2005). In addition, a District ordinance since 1958 has prohibited the discharge of industrial wastes to its sewers (DGSD, 2005, Appendix B).

Three of the COCs: PCE, TCE, and TCA, were commonly used as industrial degreasing operations in the United States. Under anaerobic conditions in the groundwater these compounds biologically degrade as follows:

PCE → TCE → cis-1,2-DCE → vinyl chloride → ethene (gas)
and
TCA → 1,1-DCA → 1,1-DCE
↓
Chloroethane

Based on the testing conducted by U.S. EPA in the EIP, numerous properties have been found with soil beneath containing elevated COC levels. For example Scot's property contained 6.000 mg/kg PCE at 16-18 ft bgs, Lindy's property contained 19.000 mg/kg TCA at 9.5 ft bgs, Ames' property contained 120.000 mg/kg PCE at 4 ft bgs, Tricon contained 220.000 mg/kg TCE at 7.5 ft below ground surface, and Precision's property contained 17.000 mg/kg TCE at 15 to 22.5 ft below ground surface (Weston, 2002).

INVESTIGATION OF THE DISTRICT'S PROPERTY

There has been considerable subsurface investigation activity conducted on the District's property, with the primary emphasis on the former sludge lagoons. Theoretically, if chlorinated solvents were present in the influent wastewater, chlorinated solvents would concentrate in the sludge. If chlorinated solvents were present, they theoretically could migrate vertically downward to the groundwater, leaving behind residual contamination in the soils as the contaminants move downward.[4] This theory is similar to that followed at all of the sites investigated in EIP; that is, look for residual contamination in the soils as potential sources to the regional groundwater contamination, as the examples above illustrate.
The chronology of the various investigations on the District's property is presented below.

[4] However the high organic content in the digested sludge would result in only a small fraction of any chlorinated solvents present partitioning into the groundwater.

Weston 2002

As a result of the discovery of chlorinated solvents in private drinking water supplies southeast of the EIP, the Illinois EPA directed a series of soil probes throughout EIP. One of the soil probes, GP-13, was located northeast of the District's sludge lagoons. One volatile organic compound (VOC), methylene chloride, at 0.003 mg/kg, was detected in a soil sample from GP-13 at 10 ft below ground surface (bgs). Methylene chloride is a common laboratory contaminant, not a COC in the EIP, and this result is less than (does not exceed) the Illinois remedial objective for methylene chloride in soil under 35 Ill Adm Code 742 in any event.

In August 2002, Weston Solutions, Inc. (Weston) issued a Phase II Site Assessment Report on Ellsworth Park. Soil samples were collected from BD-4, located near the southeast corner of the sludge lagoons (see Figure 3), one at 15 to 17.5 feet bgs and another at 37.5 to 40 feet bgs. Both BD-4 soil samples were void of chlorinated compounds.[5] Boring BD-4 was subsequently converted to a monitoring well (BD-4I). TCE was detected in the groundwater at 0.0092 mg/L in monitoring well BD-4(I) (screened in 47 to 57 ft bgs) near the southwest corner of the lagoons. Weston recommended:

> Additional work is recommended to evaluate if TCE observed in shallow groundwater samples at this location is due to potential source material within the lagoons. At a minimum, this should include comprehensive investigation of lagoon sludge and further evaluation of the shallow groundwater chemistry and flow patterns in this area (Appendix F).

Despite the absence of any soil contamination and its consultant's recommendation for further investigation, the U.S. EPA identified the District as a Potentially Responsible Party (PRP) at the EIP Superfund Site on August 1, 2002 (Appendix G). A subsequent meeting with the U.S. EPA on September 26, 2002 confirmed that if a contaminant was found on a property, U.S. EPA identified the property owner that he was a PRP.

As discussed previously, east of the sludge lagoons, U.S. EPA had drilled two soil borings, EIP-5 and EIP-9, on the adjacent property. A water sample from EIP-5 collected by U.S. EPA between 36 and 40 ft below ground surface contained 0.0003 mg/L PCE. EIP-9, south of EIP-5, had a water sample collected by U.S. EPA between 35 and 39 ft below ground surface, which contained:

0.0006 mg/L PCE
0.0060 mg/L TCE
0.0020 mg/L cis-1,2-dichloroethylene (cis-1,2-DCE)
0.0008 mg/L TCA

A Site Investigation Work Plan, prepared by James Huff, was presented to the U.S. EPA at this September 26, 2002 meeting. U.S. EPA was supportive of the District's desire to conduct additional investigation, and offered to review the work plan. Comments were received from

[5] Appendix F includes the soil results from the Weston investigation and IEPA's earlier investigation.

U.S. EPA on the proposed work plan on October 10, 2002 (Appendix H). Huff & Huff, Inc. (H&H) responded to the U.S. EPA on October 17, 2002 regarding its comments (Appendix I).

December 2002 - Huff & Huff Investigation

On December 13, 2002, Huff & Huff completed the "Site Investigation Report on the Downers Grove Sanitary District's Sewage Lagoon Area." Soil borings through the center of both sludge lagoons were sampled continuously from 0 to 9 ft bgs, including the sludge (Sample SL-West and SL-East, See Figure 3). No COCs were detected in any of the twelve soil/sludge samples (see Figure 3). These results in my opinion are a clear indication that the sludge lagoons were not a source of groundwater contamination. There exists a contaminant-free zone between the lagoons and the regional groundwater contamination.

H&H also completed four additional monitoring wells (DG-1(1) to DG-4(1)) in the vicinity of the sludge lagoons. In addition, monitoring well DG-15(I) was installed north of St. Joseph Creek adjacent to U.S. EPA's (SB-15(I)), but screened deeper. Three of the eight monitoring wells sampled (new and existing wells) detected COCs: U.S. EPA's BD-4(I) in the southwest corner, screened 46 to 56 ft bgs of the lagoon, contained 0.0087 mg/L TCE; DG-3(I), screened 45 to 55 ft bgs in the southeast corner of the property contained 0.007 mg/L chloroethane; and DG-2(I), due east of the sludge lagoons at the property line adjacent to Dyna Gear's property and screened 49 to 59 ft bgs, contained 0.004 mg/L 1,1,1-trichloroethane (TCA) and 0.011 mg/L 1,1-dichloroethane (1,1-DCA). Implied groundwater flow in the areas screened had an east-to-west gradient (Appendix J).

Clearly, the groundwater contamination is a regional problem.

2003 Groundwater Sampling - Huff & Huff Activities

The monitoring well network around the District's sludge lagoons was sampled in March 2003, June 2003, and October 2003. In August 2003, H&H prepared a "Supplemental Site Investigation Work Plan" to install two additional intermediate wells (DG-5(I) east of the sludge lagoons and DG-6(I) northwest of the sludge lagoons). In addition, one deeper well (DG-1D) was installed adjacent to DG-1(I), northeast of the sludge lagoon. The new and existing monitoring wells were sampled in October 2003. Findings from the 2003 sampling events include:

1) There appear to be two existing groundwater zones, one in the sand/gravel above the silt layer, and a second in the silt layer (and sand layer that is present beneath the silt layer in some locations.) Those two zones exist between approximately 25 and 40 feet bgs and 45 to 55 feet bgs.

2) The shallower zone appears to flow generally to the south with a 10 foot drop in elevation across the site, while the deeper zone gradient is only 2.6 feet across the site.

3) The new wells were essentially void of COCs, except for low levels of PCE reported present in both the Trip Blank and Field Blank. TCE was present in one sample (DG-1(D)), but was also reported in the laboratory method blanks.

Appendix K contains the December 2003 report, new well logs and cross sections.

U.S. EPA 2004 Activities

U.S. EPA's contractor completed some additional work on the Dyna Gear Property (2500 Curtis), immediately east of the sludge lagoons (Appendix L). A groundwater sample from 20 to 30 ft bgs along the east side of the 2500 Curtis property (far side from the sludge lagoons) and adjacent to a detention basin was collected. This groundwater sample contained the following COCs:

PCE	0.0019 mg/L
TCE	0.1300 mg/L
c-1,2-DCE	0.0067 mg/L

The TCE level further east of the District's property is over an order-of-magnitude higher than what was found on the District's property, and again points to offsite sources to the regional groundwater contamination. The U.S. EPA did not address the oxbow that was filled in as a potential conduit for the COCs to reach the groundwater (Appendices L and R).

2004 Supplemental Site Investigation – Huff & Huff

In October 2004, H&H prepared a supplemental work plan to collect additional sludge and soil samples from the two sludge lagoons. This additional work was completed to satisfy U.S. EPA's concern that only one soil boring through the center of each sludge lagoon may be insufficient to reach the conclusion that the sludge lagoons were not a source. In addition, another round of sampling of the monitoring wells was prepared.

In February 2005, H&H issued its "Supplemental Sludge Lagoon and Groundwater Sampling Report." Four additional soil borings in each sludge lagoon were collected (SL-W-NW, NE, SE, SW and SL-E-NW, NE, SE, SW), with continuous samples to 9 feet. Figure 3 includes a boring location figure and a summary table of the results. No COCs were detected in any of the 28 sludge or soil samples collected in and below the sludge lagoons. In my opinion, this result confirmed the previous findings that the sludge lagoons are not a source of the regional groundwater problem, and there is a contaminant-free zone beneath and including the sludge lagoons. Chlorinated compounds were detected in three monitoring wells DG-2(I), DG-3(I) and BD-3(I), reasonably consistent with previous sampling events (Appendix M).

U.S. EPA's Geologist Bob Kay reviewed this report and concluded the following:

> It appears they (H&H) collected the proper number of soils samples from the proper locations at the proper depths in the proper manner and analyzed them for the proper constituents. Assuming there has been no excavation of sludge material

in the past, the fact that essentially nothing was detected in the sludge and soil during the current and previous investigations indicates these sludge drying beds aren't a source of groundwater contamination (Appendix C).

U.S. EPA's 2006 Preliminary Planning Report

In March 2006, Weston Solutions, Inc., U.S. EPA's contractor issued a Preliminary Planning Report EIP Site. This report relied upon the Tier 1 Remedial Objectives found in 35 Ill Adm Code 742 as a preliminary screening tool for soil results. This Report identifies seven "Primary Study Subareas," four "Secondary Study Subareas," and two "Other Study Areas." Appendix N identifies these areas. Of significance, the Downers Grove Sanitary District is not on any of these lists, suggesting the U.S. EPA no longer considers the District a source contributing to the regional groundwater problem. Cited in this report were the H&H 2002 results, but not the 2004 sludge lagoon results which were more extensive and confirmed the 2002 results. Soil results from the property directly south of the sludge lagoon (5200 Katrine) presented in the report found both TCE and TCA at 9.5 ft below ground surface.

Weaver Boos Consultants 2006 Sampling Activities

In April 2006, Weaver Boos Consultants (Weaver Boos) advanced four soil probes (WBS-1 through WBS-4) to depths from 25 to 29 feet bgs through the same two former sludge lagoons. Groundwater was encountered in the west two lagoon borings, so temporary monitoring wells were installed to collect groundwater samples. In addition, two soil borings to depths of 49 and 54 feet bgs were advanced on the north and south sides of the lagoons (WBW-1 and WBW-2) and permanent monitoring wells were installed in the intermediate zone. No apparent chemical odors were observed by Weaver Boos. Two soil samples from each soil probe were submitted for volatile organic compounds (VOC) analysis.

Weaver Boos soil samples detected only one VOC, toluene at a low 0.01 mg/kg in WBW-1 (north of the sludge lagoons) at 19 to 21 ft. Toluene is not a COC associated with the regional groundwater problem and this level readily achieves the Tier 1 Remedial Objectives screening level for toluene. Soil testing samples from four additional soil probes through the sludge lagoons were all void of all COCs. In fact, no volatile organics were detected.

In the groundwater samples collected beneath the sludge lagoon, acetone, a common laboratory contaminant, was detected in one sample (WBS-1) at a low 0.021 mg/L. (The Class 1 Groundwater Standard for acetone is 0.700 mg/L in Illinois and acetone is not a COC associated with the regional groundwater problem.) The north well (WBW-1) screened 40 to 50 ft below ground surface was void of VOCs in both the shallow (27 ft bgs, using a temporary well screen) and intermediate (40 to 50 ft bgs) samples. To the south of the sludge lagoons, groundwater from WBW-2 from a sample at 39 ft contained 0.0057 mg/L trichloroethylene (TCE) and 0.020 mg/L acetone. No VOCs were detected in the intermediate sample (44 to 54 ft bgs) from WBW-2. Consistent with previous groundwater samples, monitoring well DG-3(I), located in the southeast corner, contained the most compounds and highest concentrations of VOCs. Appendix

O includes the soil and groundwater results from the Weaver Boos sampling of the sludge lagoons.

Huff & Huff, Inc. split one soil sample (WBS-3) from the sludge lagoons, and all of the groundwater samples collected from the permanent monitoring wells, but not the temporary wells. The results were similar, as also presented in Appendix O. Monitoring well WBW-2 contained 0.0047 mg/L TCE, similar to the TCE in BD-4(I), 0.0050 mg/L (0.0050 mg/L is the drinking water standard). The split soil sample (WBS-3) was void of COC.

Summary of Sampling Results

Figure 4 summarizes and contains the groundwater results, by individual wells. Two temporary wells through the sludge lagoon (WBS-1 and WBS-2) collected 25 to 29 ft below ground surface contained no COC, again confirming that these lagoons are not a source of groundwater contamination, and that a contaminant-free zone exists beneath the sludge lagoons. To the north of the sludge lagoons, WBW-1(S), WBW-1(I), and DG-6(I) have all been void of COC.[6]

South of the sludge lagoon, Weaver Boos reported 0.0057 mg/L trichloroethylene (TCE) in a shallow groundwater sample from a temporary monitoring well (WBW-2(S)) at 40 ft below ground surface. The permanent well, screened deeper to a depth of 44 to 54 ft below ground surface (WBW-2(I)) contained no detectable VOCs in the Weaver Boos sample. The split sample collected by H&H from the permanent well contained 0.0047 mg/L TCE and 0.0056 mg/L 1,1,1-trichloroethane, both achieving drinking water standards at 44 to 54 ft below ground surface. Monitoring well BD-4(I), located southwest of the sludge lagoons and screened between 46 and 56 ft below ground surface has been sampled on nine occasions since 2002. TCE has consistently been detected, ranging from 0.0040 mg/L to 0.0113 mg/L. Cis-1,2-DCE has been detected on two occasions, both times at less than 0.001 mg/L[7] and TCA has been detected on four occasions, in the 0.0010 to 0.0012 range, compared to the drinking water standard of 0.2000 mg/L. Located adjacent to BD-4(I) is a deeper well, BD-4(D), screened between 72 and 82 ft below ground surface. This well has been sampled on two occasions, and no COCs have been detected.

Along the east property line, H&H has installed five monitoring wells. Northeast of the sludge lagoons there are two monitoring wells, DG-1(I), screened 23 to 33 ft bgs and DG-1(D), screened 35 to 45 ft bgs. These wells have been essentially void of COCs.[8] Moving south, due east of the sludge lagoons are monitoring wells DG-5(I) and DG-2(I). DG-5(I) has been essentially void of COCs, while DG-2(I) further south has consistently contained low levels of TCA (0.0022 mg/L to 0.0059 mg/L) and its degradation product 1,1-dichloroethane (DCA), ranging from less than 0.0050 mg/L to 0.0228 mg/L.

DG-3(I) is located in the southeast corner of the District's property and screened 45 to 55 ft bgs. This well has consistently contained DCA (<0.0050 mg/L to 0.1400 mg/L), chloroethane

[6] Except for a single 0.0017 mg/L PCE in DG-6(I) in a sampling round when PCE was also detected of a similar concentration in both the field blank and trip blank.
[7] Excluding a 0.0021 mg/L result when PCE was found in the field blank and trip blank.
[8] With the exception of PCE and TCE in two sampling rounds when also found in trip blank and/or method blank.

(<0.0008 mg/L to 0.0111 mg/L), cis-1,2-DCE (<0.0003 mg/L to 0.0083 mg/L) and vinyl chloride (<0.0007 mg/L to 0.0040 mg/L).

Monitoring well DG-4(I) is located to the southwest of the sludge lagoon, near the property line and is screened 47 to 57 ft bgs. This well has consistently been void of COCs.

Looking at the groundwater data collectively with the extensive soil tests, it is clear the sludge lagoons are not a source of COCs to the groundwater. There exists a contaminant-free zone beneath the sludge lagoons. The deeper groundwater is impacted by the regional groundwater contamination, not from the sludge lagoons.

OTHER EXPERTS

Other professionals have reviewed much of the same data has presented herein, and reached similar conclusions. Dr. Philip Bennett, retained by the Plaintiffs in the *Muniz* case identified, based on his review of the data collected, eight properties that have caused contamination of the bedrock aquifer, and the District property was not one of these eight. (Bennett, 2005).

Dr. Bennett further discussed the District property at his deposition:

Q. In your opinion, Dr. Bennett – and this may be lawyerly – this may have been lawyered in here, but let me ask. On the bottom of page 2 you say: "I will continue to review and analyze the factual material related to this report and I will update my opinions as new data are made available."
A. **Yes**

Q. Okay. Have you reviewed any new data since you wrote this report?
A. **I received last week data reports of – from site-specific assessments.**

* * *

Q. Do you recall what the package last week related to?
A. **There were several—there was the results of analyses from several properties. I was only able to glance at and retain in memory from two properties.**

Q. Okay. They were?
A. **The sewage treatment plant, whatever their name is.**

Q. Downers Grove Sanitary District?
A. **Sanitary district, thank you. In which I found a whole lot of non-detects and one sample that had an extremely low detect that I'd have to evaluate the QA to see what-how reliable that low detect was, but that is consistent with my previous opinion that the sanitary district was not a source.** (Bennett, 2006, Appendix P).

Dr. Donald Siegel, also retained by the Plaintiffs in the same matter, testified at his deposition that he agreed with Dr. Bennett that the District was not a source of groundwater contamination in the Ellsworth Industrial Park (Siegel, 2006, Appendix Q).

CONCLUSIONS

The Downers Grove Sanitary District never utilized chlorinated solvents in its treatment plant, nor would one expect such use in a municipal wastewater treatment plant. The District, since 1958, has had an ordinance prohibiting the discharge of industrial wastewater to its sewers. To the extent chlorinated solvents were present in the influent wastewater historically; their presence could only be attributed to illegal dumping by the industrial users.

To the extent chlorinated solvents were present in the influent wastewater; one would anticipate they would concentrate in the sludge generated by the District. From approximately 1970/71 to 1997, the Sanitary District operated two sludge lagoons in the southeast corner of its property for sludge drying purposes. From the earliest investigations by the Illinois EPA, through U.S. EPA, Huff & Huff and Weaver Boos, the focus on the District's property has been predominantly in and around the sludge lagoons.

The extensive soil testing completed, as described herein, has failed to identify a single contaminant of concern in, beneath, or around these sludge lagoons. There is essentially a contaminant-free zone that extends over 25 feet below these lagoons. The impacted groundwater is below this contaminant-free zone. In my opinion, this leads to the conclusion that the Downers Grove Sanitary District is <u>not</u> a source of the regional groundwater contamination beneath much of the EIP. No other environmental professional who has evaluated the extensive data generated on this property has concluded the Sanitary District is a source of the EIP groundwater contamination.

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FIGURES

FIGURES

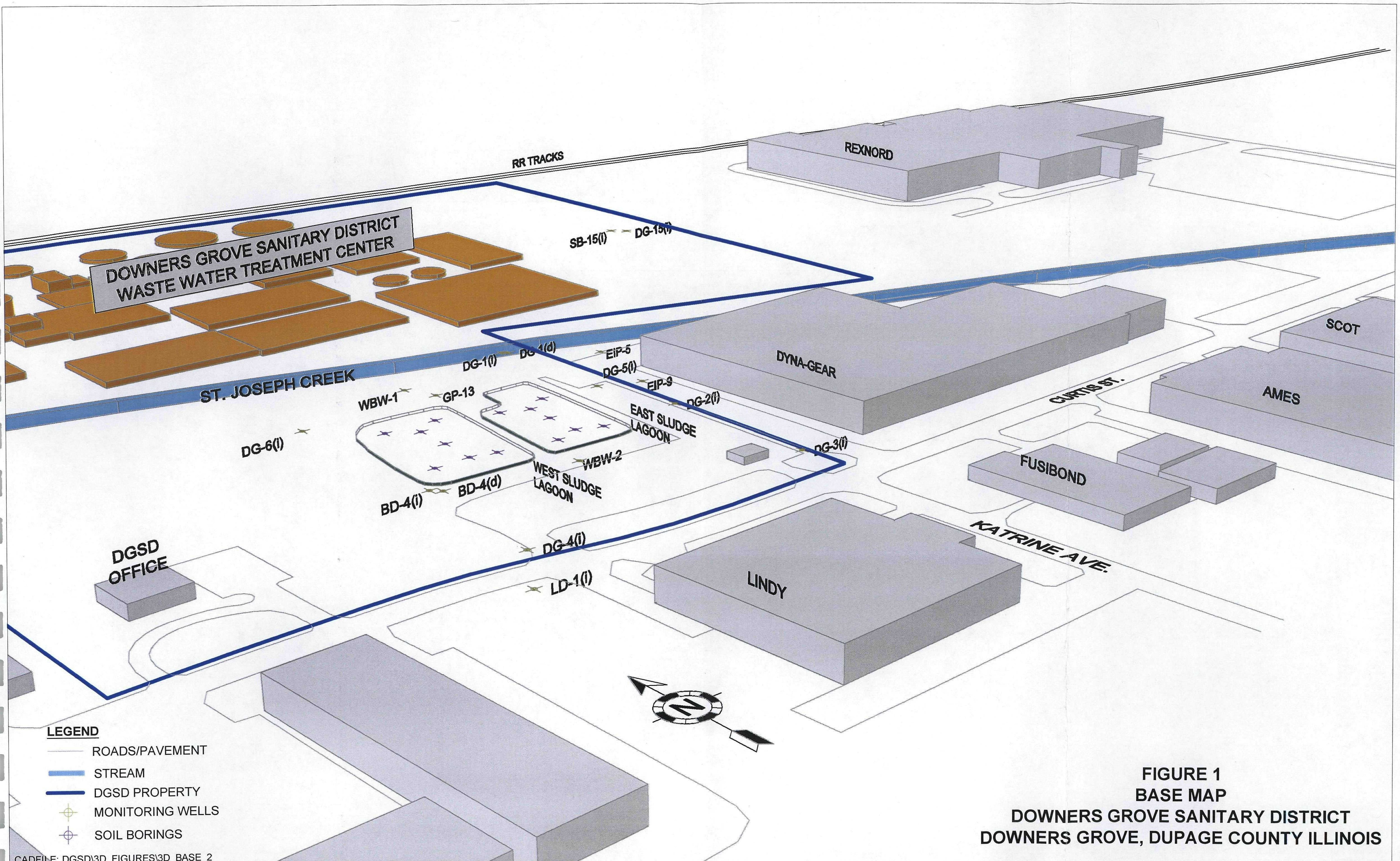
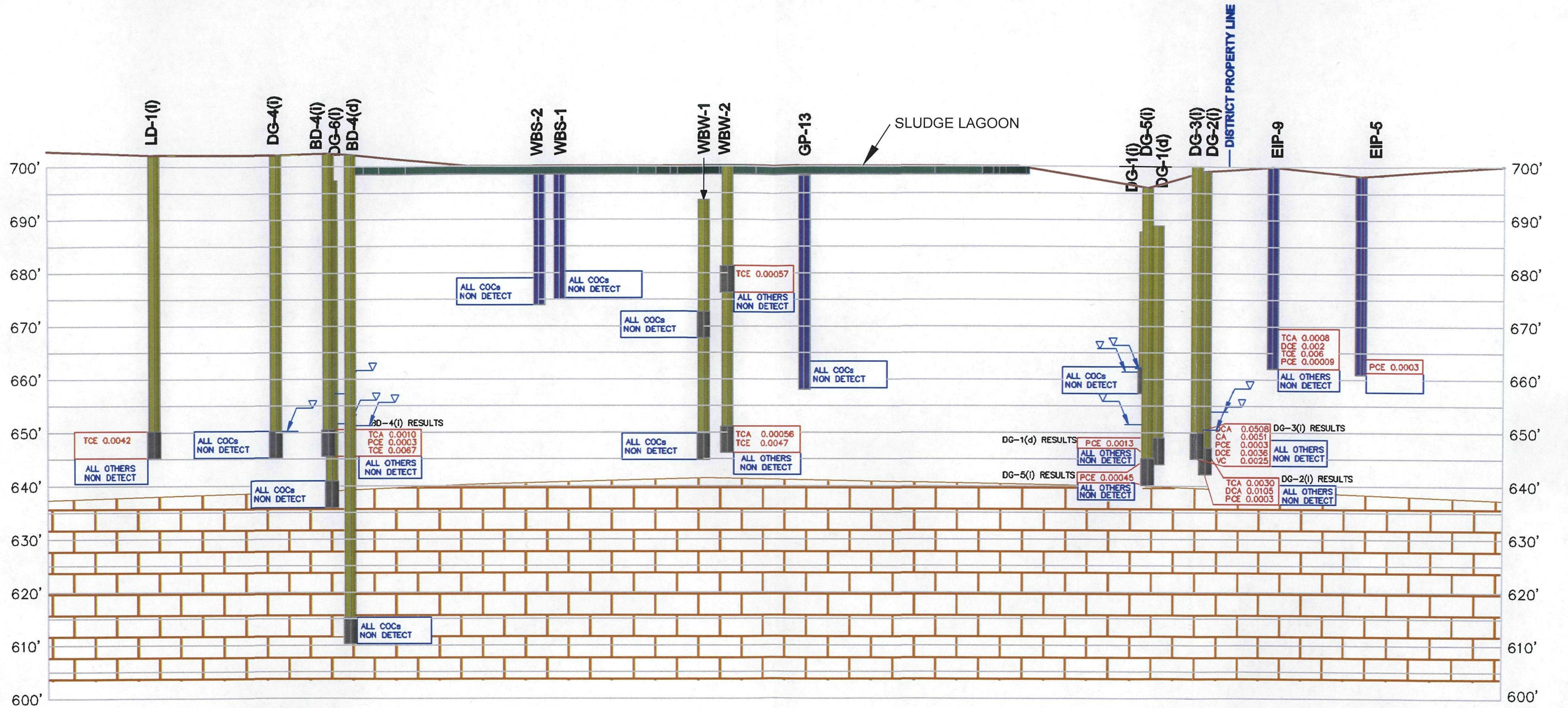


FIGURE 1
BASE MAP
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY ILLINOIS



LEGEND

GROUND SURFACE
WATER TABLE
BEDROCK
SLUDGE LAGOON
MONITORING WELLS
SOIL BORINGS

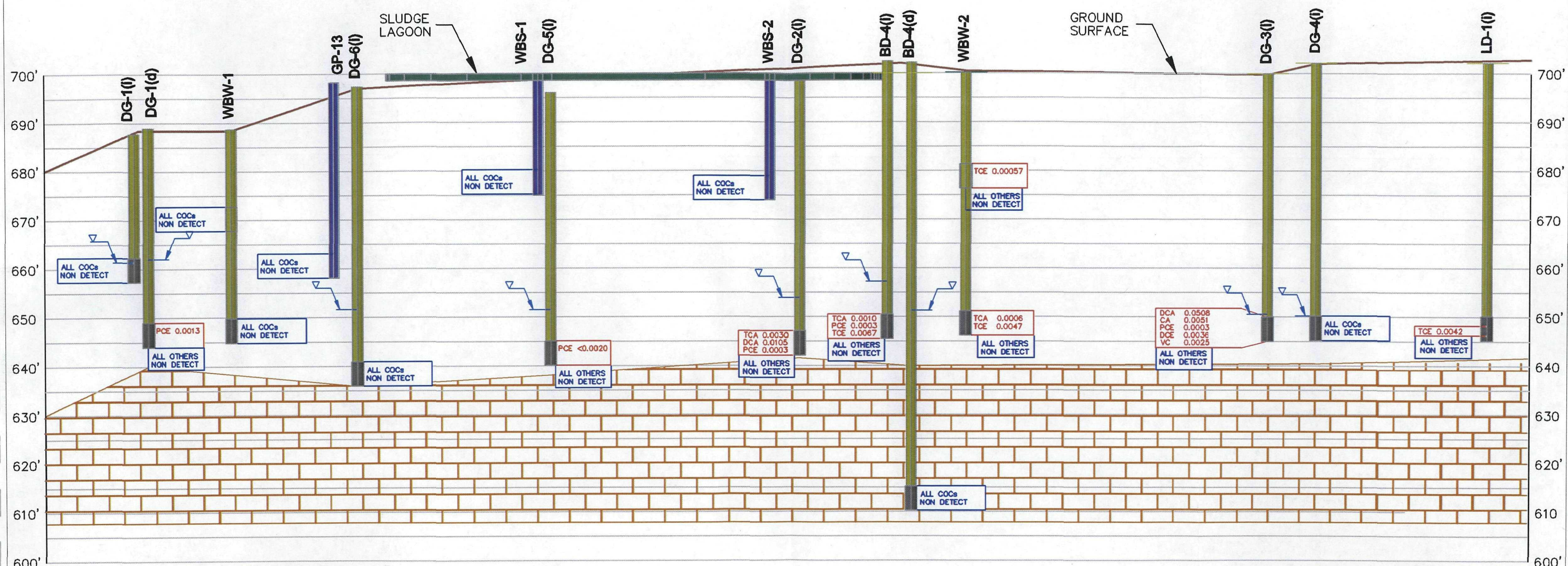
CONTAMINANTS OF CONCERN (COCs)

TCA TRICHLOROETHANE
PCE PERCLOROETHYLENE
TCE TRICHLOROETHYLENE
DCE cis-1,2-DICHLOROETHYLENE
VC VINYL CHLORIDE
CA CHLOROETHANE

PCE | XXX COMPOUND, RESULTS IN mg/L

CADFILE: DGSD\3D_FIGURES\3D_CROSS_SEC_NS

FIGURE 2A
EAST - WEST CROSS SECTION WITH GROUND WATER RESULTS
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY ILLINOIS



LEGEND

- GROUND SURFACE
- WATER TABLE
- BEDROCK
- SLUDGE LAGOON
- MONITORING WELLS
- SOIL BORINGS

CONTAMINANTS OF CONCERN (COCs)

TCA	TRICHLOROETHANE
PCE	PERCLOROETHYLENE
TCE	TRICHLOROETHYLENE
DCE	cis-1,2-DICHLOROETHYLENE
VC	VINYL CHLORIDE
CA	CHLOROETHANE

PCE XXX — COMPOUND, RESULTS IN mg/L

CADFILE: DGSD\3D_FIGURES\3D_CROSS_SEC_NS

FIGURE 2B
NORTH - SOUTH CROSS SECTION
WITH GROUND WATER RESULTS
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY ILLINOIS

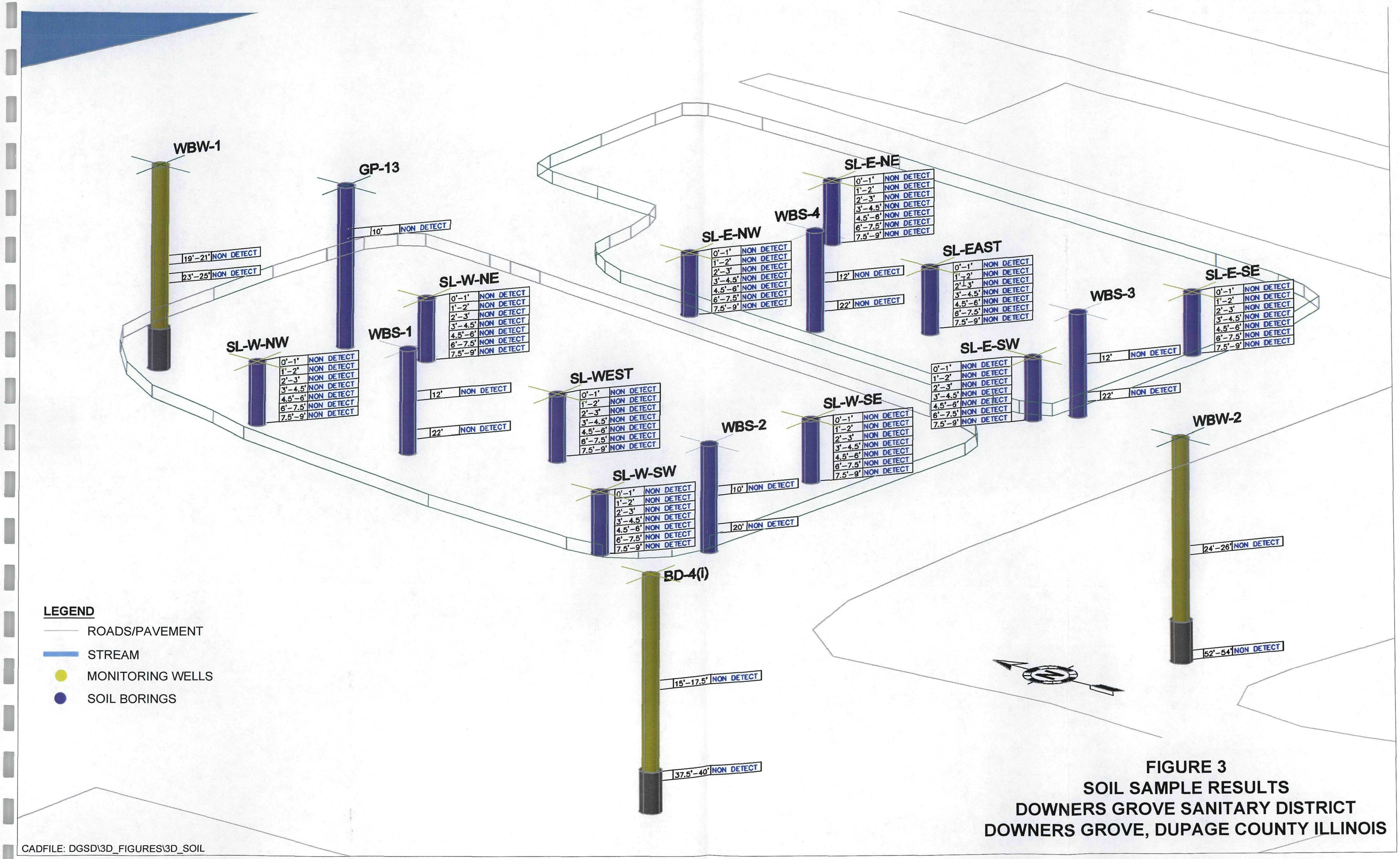


FIGURE 3
SOIL SAMPLE RESULTS
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY ILLINOIS

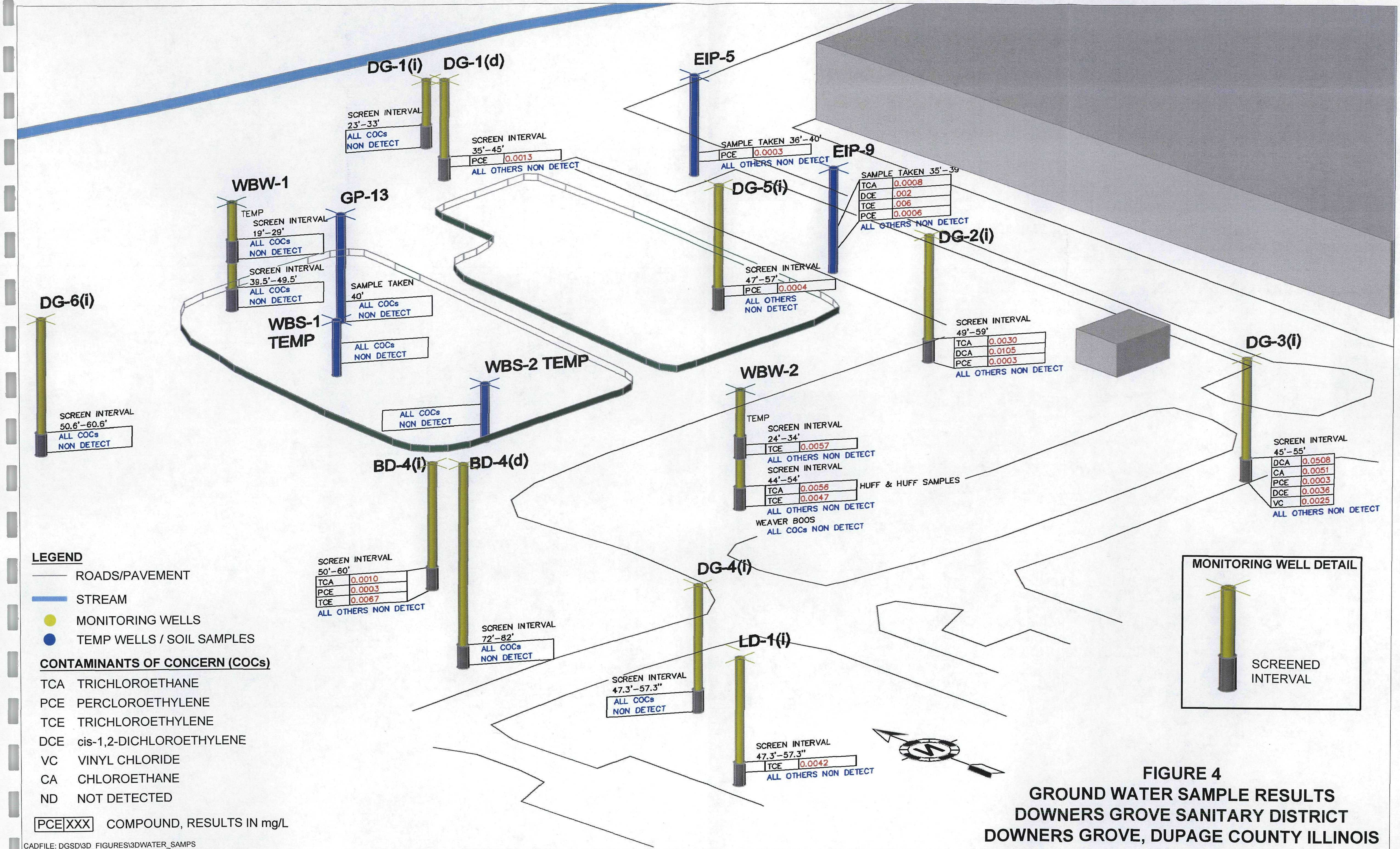


FIGURE 4
GROUND WATER SAMPLE RESULTS
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY ILLINOIS

APPENDIX A

APPENDIX A

RESUME JAMES E. HUFF

JAMES E. HUFF, P.E.
Vice President

Expertise: Hazardous Waste Management
Soil & Groundwater Remedial Design
Wastewater Treatment Planning and Design
Stream Surveys/Anti-degradation Analysis

Experience:

Since 1980, Mr. Huff has been vice president of Huff & Huff, Inc. responsible for projects pertaining to wastewater treatment, design and operation, water quality studies, hazardous waste management, groundwater and soil remediation, and compliance assessments. A significant portion of his time has been devoted to assisting clients on day-to-day environmental issues; from permitting, to setting up programs for compliance, training, and ISO 14000.

In the hazardous waste field, over sixty industrial plants have relied on Mr. Huff's expertise for complying with regulations. Mr. Huff routinely conducts approximately 20 RCRA and DOT training sessions annually. He has prepared inspection plans, contingency plans, training plans, and waste minimization plans. Mr. Huff was active in two trade associations providing written comments during the development of the hazardous waste regulations. Mr. Huff directs H&H's underground storage tank (UST) closure and remediation projects for a variety of clients. Both petroleum and solvent tank releases have required regulatory reporting and remediation. Tank systems have varied in size from single USTs to 50 USTs.

Remediation designs, many associated with underground storage tank releases, are a major portion of Mr. Huff's activities. He has designed and implemented landfarming, soil vapor extraction, air sparging, ground water pumps and treatment systems utilizing batch biological reactors, activated carbon, air strippers, and in situ enhanced bioremediation. Mr. Huff has completed treatability studies at a Federal Superfund site for cyanide and thiocyanate destruction in groundwater, including operation of a 4,000 gallons per day (gpd) pilot reactor at the site and has completed a Feasibility Study (FS) for a major chlorinated solvent release at a State Superfund site. The selected remedy for this state site was the first in Ohio that recognized intrinsic bioremediation as part of the remedy, and Mr. Huff is currently the Project Manager implementing the selected remedy. A State Superfund site in upstate New York was investigated for chlorinated solvents and drugs from a local pharmaceutical company, Mr. Huff was the project manager. Mr. Huff has directed over 15 hazardous waste closures of TSD facilities, ranging from drum storage areas to the complete clean-up of a 27-acre abandoned manufacturing facility. This abandoned manufacturing site included plating solutions, cyanide bearing sludges, oils, and over 20,000 gallons of virgin chemicals requiring placement. Mr. Huff has also been the project manager on the site investigation at four former manufactured gas plants, and he has completed the risk assessment and a remedial design that includes taking the coal tar to a hot-mix asphalt plant for one of these gas plant sites. This site received one of the first comprehensive No Further Remediation letters from the IEPA and was the recipient of the top Honor Award for Engineering Excellence in 2000. Another MGP site received a Special Achievement Engineering Excellence Award in 2007.

Compliance assessment is a significant part of Mr. Huff's work. Over 100 environmental audits of manufacturing firms have been conducted by Mr. Huff over the last fifteen years. These audits have included potential acquisitions as well as on-going industrial operations. Mr. Huff has also been involved in siting and permitting of new industrial facilities, including a mining operation and peak energy plants.

Mr. Huff has designed industrial wastewater treatment plants ranging in size from less than one thousand gallons per day to eight million gallons per day. He has assisted two petroleum refineries with nitrification issues. These designs have applied to various industrial sources, such as: foundries, plating, printed circuit boards, organic chemical, pharmaceutical manufacturers, and meat packing. Examples of industrial wastewater designs are listed below:

- Sequential batch reactors (SBRs) for BOD_5/COD reduction at pharmaceutical plant
- Side stream SBR for nitrification on meat packing three-stage lagoon
- Breakpoint chlorination for ammonia removal at chemical plant and also a meat packer
- Land application, with winter lagoon at chemical plant
- Copper removal from printed circuit board facility using sodium borohydride
- Integrated settling basin sludge drying beds at foundry

Mr. Huff has also directed 14 municipal wastewater treatment design projects. Examples of municipal design projects are listed below:

- Conversion of chlorine to sodium hypochlorite disinfection
- Conversion of wet weather storage facilities to store-treat basins, with effluent disinfection filter press for digested sludge dewater
- Sludge storage pad with enclosure
- Bar screen
- Grit, washer replacement
- Tertiary filter rehabilitation
- Secondary/Tertiary high flow bypass with chlorine contact tank and flow measurement and blending
- Anaerobic digester supernatant treatment for ammonia removal using SBR
- In-stream high purity oxygen injection into effluent and receiving stream for increasing stream D.O.
- Numerous force main and lift station designs
- Facilities Plan Development

Mr. Huff has also designed cluster wastewater treatment systems with subsurface discharge for seven residential developers/country clubs, and a temple. These systems are typically 10,000 to 20,000 gpd, utilizing two SBRs, computer controlled, followed by a large leach field. These unique systems are permitted under the IDPH under a unique experimental use permit provision.

Mr. Huff has also conducted several CSO studies including Nine Minimum Controls, O&M Plans, and Water Quality Impact Studies. Two novel in-stream aeration systems, using high-purity oxygen on a shallow Illinois stream, were designed and installed, and a system designed by Mr. Huff for ammonia removal from anaerobic digesters received an engineering excellence award in 1999.

In the area of Water Quality Analysis, Mr. Huff has completed a variety of projects, including both biological and chemical assessments. Mr. Huff has directed studies for two of the Quad Cities to assess the environmental impact of water treatment plant discharges on the Mississippi River. These studies included evaluating various locations along the Mississippi for the presence of mussel beds, the potential presence of endangered species, primarily the *Lampsilis higginsi* and whether the areas were important for fish spawning. The scope-of-work for the mussel surveys developed by Mr. Huff were reviewed and approved by U.S. Fish & Wildlife, IDOC, IEPA, and the Illinois Natural History Survey. Approvals for both of the outfalls were secured. On the Fox River, Mr. Huff was project manager for a group of municipal dischargers on a project to collect and analyze weekly water quality samples along the river, its tributaries, and outfalls at over 30 locations to establish a better database on un-ionized ammonia levels.

Mr. Huff has directed fish and benthic surveys for industrial, storm water, and municipal wastewater discharges located on the following waterways: Cedar Creek, Deep Run, Flint Creek, Thorn Creek, North Kent Creek, Tyler Creek, Kiswaukee River, Chicago Sanitary & Ship Canal, and Casey Fork Creek, and has completed antidegradation studies as part of many of these studies. Thermal studies, mixing zone studies, and multi-part diffuser designs have been completed for a variety of clients.

Mr. Huff in 2004 was retained by the Northeastern Illinois Planning Commission (NIPC) as the lead consultant to review FPA requests for consistency with the Commission's Water Quality Management Plan. To date, Mr. Huff has completed over 50 FPA requests, including the Facilities Plan associated with these. Antidegradation and nutrients have been two major issues on many of these applications.

Mr. Huff serves on the Illinois Nutrient Technical Advisory Committee, representing the American Council of Engineering Companies – Illinois (ACEC-IL). He is also the lead reviewer for NIPC on water quality impacts of proposed expansions/new discharges in northeastern Illinois. Nutrients have been a significant issue on these expansions, as they apply to NIPC's Water Quality Plan, specifically antidegradation regulations and nutrient impacts. In addition, Jim has been the project manager on antidegradation studies to support wastewater facility expansions associated with several of the stream surveys completed.

Mr. Huff has been involved in nine site specific rule changes and adjusted standards in Illinois. These studies have included ammonia, D.O., BOD_5, TSS, TDS, and sulfates.

From 1987 through 1990, Mr. Huff was a part-time faculty member, teaching the senior level environmental courses in the Civil Engineering Department at IIT-West in Wheaton, Illinois.

From 1976 to 1980, Mr. Huff was Manager of Environmental Affairs for the Armak Company (now Akzo Nobel Chemicals), a diversified industrial chemical manufacturer. At Armak, Mr. Huff was responsible for all environmental activities at eight plants located throughout the United States and Canada. Technical work included extensive biological and chemical treatability studies as well as designing new facilities, including two wastewater pretreatment facilities, a land application system, and an incinerator system.

Previously, Mr. Huff was an Associate Environmental Engineer in the Chemical Engineering Section at IIT Research Institute (IITRI). Much of this work involved advanced wastewater treatment development, including applying a combination of ozone/UV treatment of cyanide, PCB's, RDX, HMX, and TNT and the use of catalytic oxidation of cyanide using powdered activated (carbon impregnated with copper in refinery activated sludge units. At Mobil Oil's Joliet Refinery Mr. Huff was employed as an Advanced Environmental Engineer during the construction and start-up of the largest grassroots refinery ever constructed. Mr. Huff was responsible for wastewater training, permitting start-up, and technical support as well as for water supply, solid waste, and noise abatement issues at the refinery from 1971 to 1973.

<u>Membership</u>

Illinois Association of Wastewater Agencies
American Council of Engineering Companies - IL
- Environmental Committee 1999 – 2005
  - Chairman-June 2000-2004
- Board of Directors – 2005-2007

Water Environment Federation Member
Illinois Water Environment Federation
National Water Well Association
Certified Class 2 and Class K Sewage Treatment Works Operator in Illinois

Licenses: Registered Professional Engineer, Illinois and New Jersey

Education:

1966-1970	Purdue University, West Lafayette, Indiana B.S. in Chemical Engineering
1970-1971	Purdue University, West Lafayette, Indiana M.S.E. in Environmental Engineering
1974-1976	University of Chicago Graduate School of Business. Part time
Honors:	Omega Chi Epsilon (Chem. Engr. Honorary) President's Academic Award Graduated with Distinction Fellowship from the Federal Water Quality Admin.
Thesis:	"Destabilizing Soluble Oil Emulsions Using Polymers with Activated Carbon," Major Professor, Dr. James E. Etzel

Papers:

"Ozone-U.V. Treatment of TNT Wastewater," E.G. Fochtman and J.E. Huff, International Ozone Institute Conference, Montreal, May 1975.

"Characterization of Sensory Properties" Qualitative, Threshold, and Supra-Threshold," J.E. Huff and A. Dravnieks, American Water Works Assoc. Seminar, Minneapolis, MN, June 1975.

"Optimizing Wet Scrubber Systems for Odor Control in the Rendering Industry," R.H. Snow, J.E. Huff, and W. Boehme, Purdue Air Quality Conference, Lafayette, IN, November 1975.

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"Measurement of Water Pollution Benefits - Do We Have the Option?" L.L. Huff, J.E. Huff, and N.B. Herlevson, IL Water Pollution Control Assn 3rd Annual Conference, Naperville, IL, May 1983.

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"Environmental Audit for Wastewater Compliance," J.E. Huff, Federation of Environmental Technologists Environmental '86 Seminar, Milwaukee, WI, March 5, 1986.

"Technical and Economic Feasibility of a Central Recovery Facility for Electroplating Wastes in Cook County, IL," J.E. Huff and L.L. Huff, 1986 Governor's Conference on Science and Technology in Illinois, Rosemont, IL, Sept. 3, 1986.

"Hazardous Waste Closure Procedure," J.E. Huff, Federation of Environmental Technologists Seminar, Rockford, IL, Dec. 17, 1986.

"Training & Contingency Plan Requirements Under the Hazardous Waste/Right-To-Know/OSHA Regulations," J.E. Huff, Federation of Environmental Technologists Environment '88, Milwaukee, WI, March 9, 1988.

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"Storm Water Discharges," J.E. Huff, Federation of Environmental Technologists Environment '90 Seminar, Milwaukee, WI, March 7, 1990.

"Cleanup Standards-Past, Present and Future," J.E. Huff and D. O'Neill, Chicago Bar Association's Environmental Law Seminar "Underground Tanks: Down and Dirty," Chicago, IL, June 8, 1993.

"Engineering Aspects of Individual Wastewater System Design," J.E. Huff, 22nd Annual Northern Illinois Onsite Wastewater Contractors Workshop, St. Charles, IL, February 27, 1995.

"Illinois Site Remediation Program," J.E. Huff, Institutional Lenders Environmental Focus Group, Chicago, IL, March 14, 1997.

"Cleaning Up Contaminated Property in Illinois," J.W. Watson and J.E. Huff, Midwest Environmental Corporate Counsel Association, September 18, 1997.

"Total Maximum Daily Loadings (TMDL) and Ammonia Conditions in the Fox River Waterway," J. E. Huff and S. D. LaDieu, Illinois Water '98 Conference, Urbana, IL, Nov. 16, 1998.

"The Illinois Ammonia Water Quality Standards: Effluent Implications & Strategies for Compliance," L.R. Cunningham & J. E. Huff, Illinois Water '98 Conference, Urbana, IL, Nov. 16, 1998.

"Beneficial Reuse of Coal Tar Impacted Material in Recycled Asphalt-LaGrange Illinois Case Study," J.E. Huff, Midwest Energy Association's Environmental Management Conference, Denver, CO, October 5, 2000 and at the Site Remediation Technologies & Environmental Management Practices in the Utility Industry, Orlando, FL, December 4-7, 2000.

"Impact of a High Sulfate and TDS Industrial Discharge on Municipal Wastewater Treatment," J.L. Daugherty, J.E. Huff, S.D. LaDieu, and D. March, WEFTEC 2000, Anaheim, CA, October 17, 2000.

"Remediation of MGP Source Material Below the Water Table & On-Site Water Treatment," J.E. Huff, M. Matuck, and L.M. Paulson, Midwest Energy Association Environmental Management Conference, Itasca, IL, October 28, 2002.

"Phase II Storm Water Regulations – Compliance Strategies For The Gas Transmission/Distribution Industry," J.E. Huff, American Gas Association 2003 Operations Conference, Orlando, Florida, April 28, 2003.

"Endocrine Disruptors or Better Living Through Chemistry" Illinois Association of Wastewater Agencies Fall Meeting, Bloomington, IL, November 14, 2003.

"Emulsified Zero-Valent Iron: An Emerging Technology" J. E. Huff, Association of Environmental & Engineering Geologists-North Central Section, February 20, 2007.

APPENDIX B

APPENDIX B

DISTRICT'S RESPONSES TO 3RD PARTY PLAINTIFFS FIRST SET OF REQUESTS FOR PRODUCTION OF DOCUMENTS – MUNIZ CASE, SEPTEMBER 9, 2005

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

ANN MUNIZ and ED MUNIZ; et al.; individually and on behalf of all others similarly situated, Plaintiffs, v. REXNORD CORPORATION; et al.; Defendants. ______________________________ REXNORD CORPORATION; et al.; Third-Party Plaintiffs, v. ARROW GEAR COMPANY; et al.; Third-Party Defendants.	)	Case No. 04 C 2405 Judge John W. Darrah Magistrate Judge Levin

DOWNERS GROVE SANITARY DISTRICT'S RESPONSES TO THIRD-PARTY PLAINTIFFS' FIRST SET OF REQUESTS FOR PRODUCTION OF DOCUMENTS TO THIRD-PARTY DEFENDANTS

Pursuant to Federal Rule of Civil Procedure 34, the Downers Grove Sanitary District ("DGSD") responds to Third-Party Plaintiffs' First Set of Requests for Production of Documents to Third-Party Defendants.

INTRODUCTORY STATEMENT

1. Most of the documents requested from DGSD in Third-Party Plaintiffs' First Set of Requests for Production of Documents were produced in a related matter, *LeClercq v. Lockformer, et al.*, No. 00 C 7164, bates labeled DGSD 1 through DGSD 20147 (the "*LeClercq* Production"). If Third-Party Plaintiffs, all of whom were parties in the *LeClercq* matter, wish to review the *LeClercq* Production, those documents will be available for inspection and copying at

express reservation of:

(a) all questions as to the competence, relevance, materiality and admissibility as evidence for any purpose of the information or documents, or the subject matter thereof, in any aspect of this or any other action, arbitration, proceeding or investigation;

(b) the right to object on any ground to the use of any such documents or information, or the subject matter thereof, in any aspect of this or any other action, arbitration, proceeding or investigation;

(c) the right to object at any time to a demand for any further response to this or any other interrogatories, request to admit or request for the production of documents.

7. Each of the following responses is made subject to and without waiver of the foregoing General Objections.

RESPONSES TO REQUESTS FOR PRODUCTION

1. All manuals, videotapes, photographs, studies, books, pamphlets, and brochures, from the time the facility in question began operation to the present regarding the use, storage, disposal and/or release of chlorinated solvents at and/or from the facility in question.

RESPONSE:

Without waiving any of the general objections stated above, DGSD notes that it has had in place since 1958 an ordinance expressly prohibiting the discharge of industrial process water to DGSD. A copy of that ordinance was previously produced in the *LeClercq* Production. DGSD has not previously and does not currently purchase, use, store, discharge, or dispose of chlorinated solvents, and, accordingly, there are no other documents responsive to this request.

2. All documents, books, pamphlets, brochures, training materials, and anything else in writing, which pertain, in whole or in part, to all policies and procedures to be followed by your officers and employees, at any time in the past, in regard to the use, storage, disposal and/or release of chlorinated solvents at and/or from the facility in question.

110. All documents which would identify the manufacturer of any chlorinated solvents sold to you which were used at the facility in question, or any other location, including, but not limited to, brochures, instruction manuals, warnings, catalogs, sales agreements and/or invoices.

RESPONSE:

See response to request 4.

111. Any and all documents relating to consideration, negotiation and/or implementation of the Consent Decree with EPA regarding the Ellsworth Industrial Park Site.

RESPONSE:

DGSD is a not a party to the Consent with EPA regarding the Ellsworth Industrial Park, and, accordingly, there are no documents responsive to this request.

Respectfully submitted,

DOWNERS GROVE SANITARY DISTRICT

Dated: September 9, 2005

By: ______________________
One of its Attorneys

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CH01/ 12435635.1

DOWNERS GROVE SANITARY DISTRICT

5120 MAIN STREET

DOWNERS GROVE, ILLINOIS

TELEPHONE: WOodland 9-0664

AN ORDINANCE

REGULATING THE USE OF PUBLIC SEWERS AND SEWER SYSTEMS

November, 1958

ARTICLE I—DEFINITIONS

Unless the context specifically indicates otherwise, the meaning of terms used in this ordinance shall be as follows:

Section 1. "B.O.D." (denoting Bio-Chemical Oxygen Demand) shall mean the quantity of oxygen utilized in the bio-chemical oxidation of organic matter under standard laboratory procedure in five days at twenty degrees Centigrade (20C.) expressed in parts per million by weights.

Section 2. "Building drain" shall mean a sanitary sewer extending from any building structure to the public sewer or septic system, as the case may be.

Section 3. "Combined Sewer" shall mean a sewer receiving both surface runoff and sewage.

Section 4. "District" shall mean the Downers Grove Sanitary District.

Section 5. "Garbage" shall mean the waste from the preparation, cooking and dispensing of food and from the handling, storage and sale of produce.

Section 5(a). "Garbage, Shredded" shall mean the wastes from the preparation, cooking and dispensing of foods that have been shredded to such a degree that all particles will be carried freely under flow conditions normally prevailing in public sewers, with no particle greater than one-quarter inch in dimension.

Section 6. "His"—Wherever in this ordinance the word "his" is used it shall be construed to mean "his", "hers" or "its", consistent with the context of the section wherein the word "his" is used.

Section 7. "Industrial waste" means any liquid, gaseous, solid or other waste substance or a combination thereof resulting from any process of industry, manufacturing trade or business or from the development, processing or recovery of any natural resources.

Section 8. "Municipality" shall mean either the Village of Downers Grove, the Village of Westmont, or the County of DuPage, as the case may be.

Section 9. "Natural Outlet" shall mean any outlet into a water course, pond, ditch, lake, or other body of surface or ground water.

Section 10. "Persons" shall mean individual, firm, company, association, society, corporation or group.

Section 11(a). "pH" shall mean the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

Section 11(b). "Pollution" shall mean such alteration of the physical, chemical or biological properties of any waters of the District, or such discharge of any liquid, gaseous or solid substance into any waters in the District as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare.

Section 12. "Private Sewage Disposal System" shall mean any arrangemnet of devices and structures used for treating sewage on private property.

Section 13. "Public Sewer" shall mean a sewer in which all owners of abutting properties within the District have equal rights and is controlled by the District.

Section 14. "Sanitary Sewage" or "Sewage" shall mean and include water carried domestic wastes and wastes discharged from the sanitary convenience of residences, public buildings, institutions and industrial plants (other than industrial wastes from such plants).

Section 15. "Sanitary Sewer" or "Sewer" shall mean a pipe or conduit which carries sewage and to which storm, surface, and ground waters are not intentionally permitted.

Section 16. "Shall" is mandatory: "May" is permissive.

Section 17. "Storm Drain" or "Storm Sewer" shall mean a conduit or sewer which carries storm and surface waters and drainage but excludes sewage and industrial wastes.

Section 18. "Superintendent" shall mean either the District Field Superintendent or the District Plant Superintendent.

Section 19. "Suspended Solids" shall mean the solids that either float on the surface of, or are in suspension in water, sewage, or other liquids, and which are removable by laboratory filtering.

Section 20. "Water Course" shall mean the channel in which a flow of water occurs, either continuously or intermittently.

ARTICLE II—USE OF PUBLIC SEWERS

Section 1. It shall be unlawful for any person to place deposit or permit to be deposited in an unsanitary manner upon public or private property within the boundaries of the District, or any area under the jurisdiction of said District, any human or animal excrement, garbage or other objectionable waste.

Section 2. It shall be unlawful to discharge to any natural outlet within the District, or any area under the jurisdiction of said District, any sanitary Sewage, industrial wastes, or polluted waters, except where suitable treatment has been provided in accordance with subsequent provisions of this ordinance.

Section 3. No person shall uncover any public sewer in the

District for any purpose or make any connection therewith or uncover any of the connecting branches thereof, or open any manholes, or flush tanks in said District except on a written permit from the Superintendent.

Section 4. No person shall discharge, or cause to be discharged any storm water, surface water, ground water, roof runoff water, sub-surface drainage, cooling water, or industrial process water to any sanitary sewer. Combined sewers shall not be constructed hereafter.

Section 5. No person or persons shall connect to any sanitary sewer any private building cesspool, underground drain, privy, privy vault or any other channel conveying water or filth.

Section 6. Except as hereinafter provided, no person shall discharge or cause to be discharged any of the following described waters or wastes in any public sewer:

(a) Any liquid or vapor discharge from an industrial plant having temperature higher than one hundred fifty (150) degrees Fahrenheit;

(b) Any water or waste which may contain more than one hundred parts (100) per million, by weights, of fat, oil or grease;

(c) Any gasoline, benzine, naphtha, fuel oil or other flammable or explosive liquids, solids or gas;

(d) Any garbage or vegetable parings (that have not been properly shredded);

(e) Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, or other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage treatment plant;

(f) Any waters or wastes having a pH lower than five and five tenths (5.5) or higher than nine (9.0) or having any other corrosive property capable of causing damage or hazard to structure, equipment and personnel of the sewage treatment plant;

(g) Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process constituting a hazard to humans or animals, or creating any hazard in the receiving waters of the sewage treatment plant;

(h) Any waters or wastes containing suspended solids or such character in quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant:

(i) Any noxious or malodorous gas or substance capable of creating a public nuisance.

Section 7. Grease, oil and sand interceptors shall be provided when, in the opinion of the Superintendent, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units other than hotels and apartment buildings. All interceptors shall be of a type and capacity approved by the Superintendent, and shall be located as to be readily and easily accessible for cleaning and inspection.

Section 8. Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, and in a continuously efficient operation, at all times.

Section 9. The admission into sanitary sewers of any waters or wastes having:

(a) A five day B.O.D. greater than three hundred (300) parts per million, by weight, or

(b) Containing more than three hundred fifty (350) parts per million, by weight, of suspended solids, or

(c) Containing any quantity of substances having the characteristics described in Section 6, or

(d) Having an average daily flow greater than two per cent (2%) of the average daily flow of the District,

shall be subject to review and approval of the Superintendent. Where necessary in the opinion of the Superintendent, the owner shall provide, at his expense, such preliminary treatment as may be required to:

(1) Reduce the B.O.D. to three hundred (300) parts per million and the suspended solids to three hundred fifty (350) parts per million by weights, or

(2) Reduce objectionable characteristics and constituents to within the maximum limits provided in Section 6, or

(3) Control the quantities and rates of discharge of such waters or wastes.

Section 10. The owner or builder of any new houses, building or structure to be used for human occupancy, employment, recreation or other purpose, hereinafter constructed on any property within the boundaries of the District where any point of said property is located within two hundred fifty (250) feet of a public sanitary sewer shall be required, at his own expense to construct suitable toilet facilities thereon, and to connect such facilities thereon directly with said sanitary sewer in accordance with the provisions of this Ordinance.

Section 11. The owner of any house, building, structure or property presently existing within the boundaries of the District, and used for human occupancy, employment, recreation and other purposes, and where any point of said property on which said house, building or structure is located within two hundred fifty (250) feet of any public sanitary sewer, and the present sewage facilities for said house, building or structure are now or hereafter deemed defective, insufficient and ineffective by the Superintendent of this District or by the proper officer of any city, village or county, shall be required, at his own expense, to connect the toilet facilities therein to the public sanitary sewer of the District in accordance with the provisions of this Ordinance.

Section 12. Whenever the Superintendent or a duly authorized officer of any city, village or county located within the boundaries of said District, shall deem it advisable to require any owner of any property within said District to connect his toilet facilities with a public sanitary sewer as hereinabove provided, a notice of such direction shall be mailed to the last known address of the owner, tenant or occupant of said property ordering the connection of the toilet facility of such house, building or structure to the public sanitary sewer of the District within ninety (90) days after date of such notice.

Section 13. The failure of any owner, tenant, occupant or builder to install such toilet facilities and/or to connect such toilet facilities to the public sanitary sewer of the District within the specified period in said notice shall be deemed held and construed to be in violation of this provision and punishable as hereinafter provided.

Section 14. No person shall make or cause to be made any connection with a sanitary sewer in said District except under a written permit for the work, issued by the Collector and approved by the Superintendent of said District and upon the payment of a fee as set forth herein.

(a) For a single family residence, located on property within said District as of December 3, 1957;

(1) For residence constructed prior to that date: Ten dollars ($10.00);

(2) For residence constructed after that date; Twenty-five dollars ($25.00);

(b) For a single family residence located on property annexed to said District after December 3, 1957: Two hundred dollars ($200.00);

(c) For multiple dwellings (including hotels and motels); Two hundred dollars ($200.00) for the first unit or apartment and Twenty-five dollars ($25.00) for each additional unit or apartment;

(d) For commercial property (other than multiple dwellings, industrial and manufacturing property) and for combined commercial and residential property; Two hundred fifty dollars ($250.00) for the first connection and twenty-

five dollars ($25.00) for each additional sewer connection. (For the purpose of Section 14 (d) each floor drain, wash basin, toilet, sink, or other connection through which wastes may pass into the sewers of said District shall be considered a sewer connection.)

(e) For industrial or manufacturing property an amount based upon the number of square feet of floor area as determined from a complete set of plans and specifications to be supplied to the District by the person or persons seeking such connection permit in the same manner and form as the plans and specifications used to obtain a building permit from the municipality involved, as follows:

(1) Less than 25,000 square feet: $500.00

(2) 25,000 square feet or more but less than 50,000 square feet: $750.00

(3) 50,000 square feet or more, but less than 75,000 square feet: $1,000.00

(4) 75,000 square feet or more, but less than 100,000 square feet: $1,500.00

(5) 100,000 square feet or more, but less than 150,000 square feet: $2,000.00

(6) 150,000 square feet or more, but less than 200,000 square feet: $2,500.00

(7) 200,000 square feet or more: $3,000.00

(f) Where a lift station is required to carry wastes from any house, building or structure, under any permit hereinafter issued by the District, to the Treatment Plant of the District, an additional fee of Twenty-five dollars ($25.00) shall be charged for each permit so issued.

Section 15. No statement contained in this article shall be construed as preventing any special agreement or arrangement between the District and any person whereby any industrial waste of unusual strength, or character, may be accepted by the District for treatment, subject to payment therefor by the person as prescribed by the District.

ARTICLE III—PRIVATE SEWAGE DISPOSAL

Section 1. Where a public sanitary sewer is not available, as provided for in ARTICLE II, the building sewer shall be connected to a private sewage disposal system complying with the provisions of the municipal authority of the City, Village or County wherein such system is located.

Section 2. At such time as public sewer becomes available to a property served by a private sewage disposal system as provided in ARTICLE II, and the private sewage disposal system becomes defective, or unusable or unacceptable, a direct connection shall be made to the public sewer in compliance with this five feet of either side of the public sewer in such street, alley, easement or public right-of-way without the permission of the Superintendent.

Section 5. No more than one building shall be connected with the public sewer through one drain without a permit signed by the Superintendent.

Section 6. In opening trenches in any street or public way, the paving or ballast must be removed with care, the sides of the trenches must be sheeted or braced when directed, and in the manner directed by said Superintendent. The earth thrown from the trench must be placed so as not to obstruct the way, and so as to cause the least obstruction to public travel. All water pipes must be protected from any injury and the trench enclosed and lighted at night and every precaution taken to prevent injury to persons or property during the progress of the work, and the street shall be restored to identically the same condition when the said work is completed as it was before the work was begun.

Section 7. Any settlement over a building drain on any street occurring within ninety (90) days shall be repaired at the expense of the owner of the property from which said drain has been laid.

Section 8. Notice must be left at the office of the Collector of the District twenty-four hours prior to the beginning of any work upon a building drain and no materials shall be used or work covered until it is inspected and approved by the Superintendent.

Section 9. All industrial connections shall include a manhole on the property of the applicant, easily accessible for inspection, which said manhole shall be constructed and maintained and be the sole responsibility of the owner of said property upon which said manhole is located.

ARTICLE VI—NOTICES

Section 1. Whenever and wherever within the boundaries of the District it shall be made to appear that any person is violating any of the provisions of this ordinance, the Superintendent may (but is not required as a condition precedent to prosecution for violation) cause to be served, personally or by mail, upon the alleged offender, a notice in writing stating the date and nature of the alleged offense, and directing that the same cease and desist immediately upon service of the notice, and that the act or ommission causing such violation be corrected within thirty days, or within such reasonable time as the circumstances may require.

Section 2. The failure, neglect and refusal of the person, alleged to be in such violation, to cease and desist therefrom

within the time stated in such notice, shall be deemed a violation of the provisions of this ordinance, and punishable as hereinafter provided.

ARTICLE VII—PROTECTION FROM DAMAGE

No person shall maliciously, wilfully or wantonly break, damage, destroy, uncover, deface or tamper with any of the sewers, appurtenances, equipment, machinery, lift stations, or structures of the sewage treatment plant owned and operated by the District. Any violation hereof shall be punishable as hereinafter provided.

ARTICLE VIII—PENALTIES

Section 1. Any person who is apprehended in the violation of the provisions of Article VII hereof shall be taken before the Police Magistrate of the municipality, or a justice of the peace in the Township of Downers Grove and/or Lisle, and there charged and prosecuted in the name of the People of the State of Illinois pursuant to the Provisions of the Criminal Code of the State of Illinois, as made and provided.

Section 2. Any person found to be violating any of the provisions hereof and who fails, neglects and refuses to comply with the provisions thereof, within the time limited thereby, shall be prosecuted in an action for a misdemeanor instituted on the complaint of the Trustees or Superintendents of the District before a Police Magistrate of the municipality within the District wherein such offense occurs, or before a Justice of the Peace of the Township wherein the offense occurs, and upon conviction shall be fined in an amount not less than Twenty-five dollars ($25.00) and not exceeding Two hundred dollars ($200.00) and costs. Each day in which any violation shall continue shall be deemed a separate offense.

ARTICLE IX—GENERAL PROVISIONS

Section 1. The foregoing penalties and prosecutions therefor shall not be held or construed as constituting a bar, release or waiver by the District to the prosecution by the District for any civil damages it may sustain because of violations by any person of the provisions hereof, and where it shall appear that such violation has occasioned damage to the appurtenances, machinery, equipment and buildings of the District.

Section 2. It is hereby made the duty of the Superintendent to enforce full compliance with the provisions of this ordinance in every particular relating to the sewer connections, construction of building drains and plumbing work, and the exclusion of all improper substances from the drains and sewers and the failure of duty in this respect shall subject such agent to all the penalties of this ordinance.

APPENDIX C

APPENDIX C

BOB KAY'S MEMO, FEBRUARY 23, 2005

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Date: February 23, 2005

Subject: Supplemental Sludge Lagoon and
Groundwater Sampling Report
Downers Grove Sanitary District
Ellwsorth Industrial Site
Downers Grove, IL

From: Bob Kay, Geologist
Remedial Response Section 4

To: Ross del Rosario
Remedial Project Manager

Ross, I've looked over the Huff and Huff Feb 2005 report on the Downers Grove Sanitary District sampling. I have a few minor comments:

1. General Comment–it appears they collected the proper number of soil samples from the proper locations at the proper depths in the proper manner and analyzed them for the proper constituents. Assuming there has been no excavation of sludge material in the past, the fact that essentially nothing was detected in the sludge and soil during the current and previous investigations indicates these sludge drying beds aren't a source of ground-water contamination.

2. Section 3–it was my understanding Huff and Huff were going to add dissolved oxygen and oxidation-reduction potential to the field parameters. It appears this was not done. Why?

3. Table 3-1– the 2004 data appears to be reasonable, however, many of these measurements indicate more variation in water levels than would be expected due to natural causes. It may be prudent to explicitly note some of this data is suspect.

4. Figure 3-4–ground-water flow directions based on this data show rely on use of a subset of the available wells, and ignoring data from others. It is likely the actual flow direction is more complicated than is indicated in this figure, and is probably indecipherable with the available wells. The text kind of implies this, but doesn't actually make the coherent statement. Why is the data from wells DG-5I and BD-4I ignored? Why is preference given to the data from DG-1I over DG-1D? Why is the data from well DG-15I ignored? Why is there no data from LD-1I? Irregardless of

statements in the text, as to why certain wells were given more weight than others, I see no consistently applied basis for this well selection–geology, altitude of well screen–other than to point the finger at Dyna-Gear as the source.

I hope this review has been of use to you. If you have any questions or comments feel free to call me at 6-7938.

cc. S. Padavoni

Huff & Huff incorporated
environmental engineers
and consultants

512 W. Burlington Avenue, Suite 100
LaGrange, IL 60525
Phone: (708) 579-5940
Fax: (708) 579-3526
Website: http://huffnhuff.com

RECEIVED
MAR 3 - 2005
MARK LATHAM

To: Mark Latham

From: James E. Huff, P.E.

Date: February 24, 2005

Subject: Downers Grove Sanitary District
Response to Bob Kay's Comments in his February 23, 2005 Letter regarding Supplemental Sludge Lagoon and Groundwater Sampling

I have reviewed Bob Kay's memo dated February 23, 2005, and can provide additional insight into his questions.

Comment 2-Were D.O. and oxidation-reduction potential measured during the well purging?

Appendix D contains the purge data. Dissolved oxygen, conductivity, pH, and temperature were all measured each well volume. Oxidation–reduction potential (ORP) was not measured due to our oversight. Our field staff was using the Work Plan, and missed the subsequent ORP request.

Comment 3-Many of the groundwater measurements indicate more variation in water levels than would be expected due to natural causes. It may be prudent to explicitly note some of these data are suspect.

I don't believe any of the data are suspect. If I were to mark such an indication, it would be arbitrary. The 4th quarter 2004 water elevations were taken after the wells were opened and allowed to equilibrate for two hours, with readings indicating the wells stabilized after the first hour. The 4th quarter 2004 elevation data look similar to the earlier results, with large variation from well-to-well, similar to previous sampling events.

Comment 4 – Groundwater Flow Direction and the ignoring of some data.

As noted by Mr. Kay, the regional flow is more complicated than depicted on our Figure 3-4, which was intended to represent the localized flow over a small area. The text of the report discusses our concerns and highlights specific issues pertaining to calculation and presentation of flow.

The reason for not utilizing DG-5(I) was stated in Section 3.5 *Hydrogeology*, that is the potential that this well is screened into a discrete aquifer.

The reason elevation data from BD-4(I) was omitted was due to this measurement being collected on November 30, whereas all other wells were measured on November 29th. Access to this well could not be gained until we were provided with a set of keys on the 30th from Weston.

Preference was given to data from DG-1(I) over DG-1(D) due to historic issues of inconsistent elevation data and it appears to be screened within different strata.

The reason for ignoring elevation data from DG-15(I) was stated in the document since it also appears to be screened into different strata and is on the other side of St. Joseph Creek.

Monitoring well LD-1(I) was not slated as part of this sampling project and we did not sample any of the EPA wells, only gaining access to BD-4(I) for water table elevation data on the second day of the project.

I believe the reasons for presenting the calculated local flow are consistent with previous calculations and representation, and the presented local flow makes the most sense based on available data from this localized area.

APPENDIX D

APPENDIX D

LARRY COX'S LETTER TO JOE DOMBROWSKI, DECEMBER 21, 2001

Downers Grove Sanitary District

2710 Curtiss Street
P.O. Box 1412
Downers Grove, IL 60515-0703
Phone: 630-969-0664
Fax: 630-969-0827

Providing a Better Environment for South Central DuPage County

December 21, 2001

Mr. Joe Dombrowski
Remedial Project Management Section
Bureau of Land
Illinois Environmental Protection Agency
1021 N. Grand Avenue East, Box 19276
Springfield, IL 62794-9276

Re: Request for Information to assist in the Downers Grove Groundwater Investigation

Dear Mr. Dombrowski:

We have received the October 3, 2001 letter from Illinois EPA Director Renee Cipriano requesting information and documents to assist the Illinois EPA in its investigation of the Downers Grove Groundwater Investigation Site. This letter requested information about Downers Grove Sanitary District facilities at 4909 Walnut Avenue. We haven't used that address for years but the enclosed information includes the Downers Grove Sanitary District Wastewater Treatment Center located at 5003 Walnut Avenue, and the Downers Grove Sanitary District Administration Building, located at 2710 Curtiss Street, both in Downers Grove. I have spoken to Mark Gurnik at the Illinois EPA several times to obtain clarification on the requested information. We have enclosed responses to Question Numbers 1, 2, 3, 4, 5, 6, 7, 9, 10 and 11.

We met with you, Tom Crause and John Sherrill from the Illinois EPA at our facility on December 4, 2001. At that meeting, we were requested to submit to the Agency all of the information which we had gathered at that point in response to the October 3, 2001 letter request, but that we did not need to provide responses to any remaining questions from this letter. We were requested at this meeting to investigate a number of other items and we have enclosed the following items in response:

1) Soil boring report from purchase of vacant parcel in 1985 (Exhibit F-1).
2) Industrial Waste Survey Report prepared for the District in 1974 by Baxter & Woodman, Inc. (Exhibit P-1).
3) Phase II - POTW Pretreatment Report prepared for the District in 1984 by Harza Engineering Company (Exhibit P-2).

We are continuing to investigate the other items which we discussed on December 4, 2001 and will forward this information to the Agency as soon as it is available.

If you have any questions, please call.

Very truly yours,

DOWNERS GROVE SANITARY DISTRICT

Lawrence C. Cox

Lawrence C. Cox
General Manager

LCC/el
Enclosures

DOWNERS GROVE SANITARY DISTRICT
Response to Illinois EPA Request for Information
Downers Grove Groundwater Investigation Site
December 21, 2001

1. *Identify all persons consulted in the preparation of the answers to these Information Requests.*

   Lawrence C. Cox, General Manager
   Ralph E. Smith, Operations Director
   Scott J. Taylor, Maintenance Supervisor
   Sheila K. Henschel, Administrative Services Director

2. *Identify all documents consulted, examined, or referred to in the preparation of the answers to these Requests, and provide copies of all such documents.*

   The documents consulted in the preparation of these answers include permit files, financial records, property files, the District's Risk Management Program and Process Safety Management Program manual and facility improvement plans. Copies are provided as indicated.

3. *If you have reason to believe that there may be persons able to provide a more detailed or complete response to any Information Request or who may be able to provide additional responsive documents, identify such persons.*

   We are not aware of any other persons with information on these matters.

4. *Identify all persons having knowledge or information about the generation, transportation, treatment, disposal, or other handling of hazardous substances at the Facility by you, your contractors, or by prior owners and operators.*

   Lawrence C. Cox, General Manager
   Ralph E. Smith, Operations Director
   Scott J. Taylor, Maintenance Supervisor
   Sheila K. Henschel, Administrative Services Director

5. *Describe the nature of your activities or business at the Facility, with respect to purchasing, receiving, processing, storing, treating, disposing or otherwise handling hazardous substances or materials at the Site.*

   The Downers Grove Sanitary District is a unit of local government which provides wastewater collection and treatment services. The Downers Grove Sanitary District Wastewater Treatment Center (WWTC) treats an average of 11 million gallons per day of wastewater.

The WWTC uses chlorine primarily for disinfection, sand filter cleaning, and activated sludge filamentous control. Sulfur dioxide is used at the WWTC for dechlorination.

The WWTC has two chemical buildings for the chlorination and dechlorination processes. One building is for chlorine, and one is for sulfur dioxide. Included within each of the chemical buildings is an area for receipt and storage of unopened 1-ton cylinders.

The existing chlorine system is divided into treatment for normal and excess flow. Both normal and excess flow chlorination consists of four main subsystems. The first subsystem is storage and supply. The WWTC is configured for 1-ton cylinder use and has associated storage space and piping in place. The second subsystem is feed, which includes one evaporator (for excess flow), three chlorinators (two for normal flow and one for excess flow), and their associated piping. The third is distribution and injection, which includes the chlorine vacuum piping, injectors, and solution lines. The fourth subsystem is control, which includes flow pacing and residual chlorine feedback control.

The existing sulfur dioxide system is very similar to the chlorine system. Four main subsystems also comprise the existing sulfur dioxide system: storage and supply, feed, distribution and injection, and control. Storage and supply includes 1-ton cylinder storage and associated piping. The second subsystem, feed, includes one evaporator, two sulfonators, and their associated piping. The distribution and injection subsystem includes the sulfur dioxide vacuum piping, injectors, and solution lines. The fourth subsystem is control, which includes flow pacing and residual chlorine feedback control.

Liquid chlorine is delivered to the facility by flatbed truck in 1-ton cylinders. From the 1-ton cylinders, either liquid or gaseous chlorine can be withdrawn through valving manifolds. For excess flow, liquid chlorine is withdrawn to the evaporator units, while gaseous chlorine is withdrawn directly to the chlorinators for normal flow chlorination. In the evaporator, the liquid is heated past its boiling point to form a gas that passes through a pressure reducing valve to the chlorinators. The chlorinators regulate the gas flow and discharge it to the injection lines at the appropriate rate. Chlorine gas is pulled by vacuum created by injectors located on the downstream piping at various chlorine application points.

The installed sulfur dioxide system works in much the same manner as the chlorine system described above. Liquid sulfur dioxide is delivered to the facility by flatbed truck in 1-ton cylinders. From the 1-ton cylinders, either liquid or gaseous sulfur dioxide can be withdrawn through valving manifolds. Liquid sulfur dioxide is withdrawn to the evaporator units, while gaseous sulfur dioxide can be withdrawn directly to the sulfonators. Whether liquid or gaseous sulfur dioxide is drawn from the cylinders depends on the process flow rate - during times of normal flow, gaseous sulfur dioxide is drawn off, and during times of high flow, liquid sulfur dioxide is drawn off. In the evaporator, the liquid is heated past its boiling point to form a gas that passes through a pressure reducing valve to the sulfonators. The sulfonators regulate the gas flow and discharge it to the injection lines at the appropriate rate. Sulfur dioxide gas is pulled by vacuum created by injectors located on the downstream piping at the sulfur dioxide application point.

The Downers Grove Sanitary District has had a service for two small parts washers at the WWTC with Safety-Kleen since 1978. These washers are enclosed units and all spent solvent is picked up by Safety-Kleen. Copies of monthly invoices from Safety-Kleen are enclosed for the most recent 12 months, from 11-27-00 to 10-29-01 as Exhibits M-1 through M-9 and for the oldest available 12 months from 4-4-91 to 3-5-92 as Exhibits N-1 through N-10.

Small quantities of other chemicals are used in the District's wastewater laboratory. A copy of the list of substances, compounds or mixtures for which the District has an MSDS, which was provided to the Illinois Department of Labor, is enclosed as Exhibit O-1.

6. *State the dates during which you owned, operator, or leased the Facility, and provide copies of all documents evidencing or relating to initiation of such ownership, operation, or lease arrangements (e.g., deeds, leases, etc.).*

Downers Grove Sanitary District facilities were constructed over the period from 1954 through 1999 by the Downers Grove Sanitary District and have been owned and operated continuously by the Downers Grove Sanitary District.

The Downers Grove Sanitary District purchased property over the time period from 1954 through 1985. Prior property owners and the date of purchase by the Downers Grove Sanitary District are depicted on Exhibit A-1. A map of District property with parcel identification numbers is enclosed as Exhibit A-2. Copies of deeds for District property purchases are enclosed as Exhibits B-1 through B-31.

The Downers Grove Sanitary District is currently leasing two parcels to the Village of Downers Grove - one for a biosolids/wood chip pickup and staging area and another for a public works facility. Copies of both leases are enclosed as Exhibits J-1 and J-2.

The response to this question was obtained from Lawrence C. Cox, General Manager and Sheila K. Henschel, Administrative Services Director and from District records, including property files and property lease files.

7. *Provide information about the physical conditions at the Facility, including but not limited to the following:*

a) *Property boundaries, including a written legal description.*

The property boundaries of the Downers Grove Sanitary District facilities located at 5003 Walnut Avenue and 2710 Curtiss Street, Downers Grove are depicted on the enclosed Exhibits A-2 and A-3. Written legal descriptions of Downers Grove Sanitary District property are contained in the enclosed Exhibits B-1 through B-31, the deeds to Downers Grove Sanitary District property.

b) *Location of underground utilities (telephone, electrical, sewer, water mains, etc.).*

The locations of underground facilities are shown in the facility improvement plans listed on Exhibit L-1 and referenced in Item 7g below.

c) *Surface structures (e.g., buildings, tanks, etc.).*

Surface structures are depicted on the enclosed Exhibit A-3.

d) *Ground water wells, including drilling logs.*

There are two groundwater monitoring wells located on Downers Grove Sanitary District property. These wells are currently under construction by The Lockformer Company under the terms of a Protective Order issued by the U.S. District Court for the Northern District of Illinois - Eastern Division. A copy of the Protective Order is enclosed as Exhibit K-1 and a copy of the Work Plan for these wells is attached as Exhibit K-2. We have not yet received any drilling logs for these wells.

e) *Storm water drainage system, and sanitary sewer system, past and present, including septic tank(s), subsurface disposal field(s), and other underground structures; and where, when and how such systems are emptied.*

Storm water drainage, sanitary sewer system and underground structures are depicted in the facility improvement plans referenced in Item 7g below. Any septic tanks, subsurface disposal fields or underground structures which were present when properties were purchased by the Downers Grove Sanitary District have been abandoned or removed. It is not known where, when or how these systems were emptied. Information concerning the plugging of the prior water wells on these properties is contained on the enclosed invoices or affidavits enclosed as Exhibits C-1 through C-10.

f) *Any and all additions, demolitions, or changes of any kind on, under, or about the Facility, to its physical structures, or to the property itself (e.g., excavation work); and any planned additions, demolitions, or other changes to the Facility.*

Additions, demolitions and changes to the Downers Grove Sanitary District facility are depicted in the facility improvement plans listed on Exhibit L-1 and referenced in Item 7g below. There are no planned additions, demolitions or other changes to the Downers Grove Sanitary District facility. All existing buildings on property purchased by the Downers Grove Sanitary District were demolished, except the one story building on Lot 3 in Thurchak's Subdivision (PIN 812113006), which was renovated and remodeled by the Downers Grove Sanitary District. Plans for this renovation and remodeling work are included with the facility improvement plans listed on Exhibit L-1 referenced in Item 7g below.

g) *All maps and drawings of the Facility in your possession.*

An index of facility improvement plans is enclosed as Exhibit L-1. Due to the volume of plan sheets, these plans were made available for review by Illinois EPA personnel Tom Crause, Joe Dombrowski and John Sherrill on December 4, 2001, in lieu of copying all 627 sheets. This approach was approved by Mark Gurnik of the Illinois EPA during telephone conversations on October 24 and November 13, 2001.

The response to this question was obtained from Lawrence C. Cox, General Manager, Ralph E. Smith, Operations Director and Sheila K. Henschel, Administrative Services Director and from District records including property files, facility improvement files and plans and Lockformer Protective Order files.

9. *Identify the prior owners of the Facility.*

Downers Grove Sanitary District facilities were constructed over the period from 1954 through 1999 by the Downers Grove Sanitary District. There are no prior owners of Downers Grove Sanitary District facilities.

a) *The dates of ownership.*

The Downers Grove Sanitary District purchased property over the time period from 1954 through 1985. Prior property owners and the date of purchase by the Downers Grove Sanitary District are depicted on Exhibit A-1.

b) *All evidence showing that they controlled access to the Facility.*

We are not aware of any evidence concerning access by prior property owners.

c) *All evidence that a hazardous substance, pollutant, or contaminant, was released or threatened to be released at the Facility during the period that they owned the Facility.*

We are not aware of any evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released by a prior property owner.

The response to this question was obtained from Lawrence C. Cox, General Manager, Ralph E. Smith, Operations Director and Sheila K. Henschel, Administrative Services Director and from District property files.

10. Identify the prior operators, including lessors, of the Facility.

Downers Grove Sanitary District facilities were constructed over the period from 1954 through 1999 by the Downers Grove Sanitary District and have been operated continuously by the Downers Grove Sanitary District. There are no prior operators or lessors of Downers Grove Sanitary District facilities.

a) *The dates of operation.*

The Downers Grove Sanitary District purchased property over the time period from 1954 through 1985. Prior property owners and the date of purchase by the Downers Grove Sanitary District are depicted on Exhibit A-1.

b) *The nature of prior operations at the Facility.*

The use of property at the time of purchase by the Downers Grove Sanitary District is depicted on Exhibit A-1 and on the enclosed property appraisals (Exhibits D-1 through D-8) and the enclosed plats (Exhibits E-1 through E-16).

c) *All evidence that they controlled access to the Facility.*

We are not aware of any evidence concerning access by prior property owners.

d) *All evidence that a hazardous substance, pollutant, or contaminant, was released or threatened to be released at or from the Facility and/or its solid waste units during the period that they were operating the Facility.*

We are not aware of any evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released by a prior property owner.

The response to this question was obtained from Lawrence C. Cox, General Manager, Ralph E. Smith, Operations Director and Sheila K. Henschel, Administrative Services Director and from District property files and facility improvement files and plans.

11. *Provide copies of all local, state, and federal environmental permits ever granted for the Facility or any part thereof (e.g., RCRA permits, NPDES permits, etc.).*

Copies of the following documents are enclosed:

a) NPDES Permits

1) NPDES Permit No. 0028380 dated 7-1-77	Exhibit G-1
2) NPDES Permit No. 0028380 dated 10-10-80	Exhibit G-2
3) NPDES Permit No. 0028380 dated 10-9-86	Exhibit G-3
4) NPDES Permit No. 0028380 dated 1-22-88	Exhibit G-4
5) NPDES Permit No. 0028380 dated 1-30-90	Exhibit G-5
6) NPDES Permit No. 0028380 dated 9-25-91	Exhibit G-6
7) NPDES Permit No. 0028380 dated 10-1-96	Exhibit G-7
8) NPDES Permit No. 0028380 dated 2-20-97	Exhibit G-8
9) NPDES Permit No. 0028380 dated 3-17-98	Exhibit G-9

b) Sludge Permits

1) Illinois EPA Permit No. 1981-SC-2394 dated 6-1-81	Exhibit H-1
2) Illinois EPA Permit No. 1983-SC-1965 dated 6-30-83	Exhibit H-2
3) Illinois EPA Permit No. 1987-SC-2635 dated 5-15-87	Exhibit H-3
4) Illinois EPA Permit No. 1992-SC-0610 dated 6-12-92	Exhibit H-4
5) Illinois EPA Permit No. 1997-SC-3195 dated 3-10-97	Exhibit H-5

c) Facility Construction Permits

1) Illinois Sanitary Water Board (SWB) Permit No. 1962-D-516 dated 10-5-62	Exhibit I-1
2) Illinois SWB Permit No. 1962-D-516-1 dated 4-17-63	Exhibit I-2
3) Illinois SWB Permit No. 1966-DB-471 dated 8-24-66	Exhibit I-3
4) Illinois SWB Permit No. 1966-DB-510 dated 9-12-66	Exhibit I-4
5) Illinois SWB Permit No. 1969-DB-321 dated 5-20-69	Exhibit I-5
6) Illinois SWB Permit No. 1969-DB-321-1 dated 12-31-69	Exhibit I-6
7) Illinois EPA Permit No. 1972-DB-188 dated 2-18-72	Exhibit I-7
8) Illinois EPA Permit No. 1972-DB-188-1 dated 5-26-72	Exhibit I-8
9) Illinois EPA Permit No. 1972-DB-188-2 dated 8-14-72	Exhibit I-9
10) Illinois EPA permit No. 1972-253-(WRM) dated 9-5-72	Exhibit I-10
11) Illinois Division of Waterways Permit No. 13319 dated 3-16-73	Exhibit I-11
12) Illinois EPA Permit No. 1972-DB-188-3 dated 7-31-74	Exhibit I-12
13) Illinois EPA Permit No. 1972-DB-188-4 dated 11-25-74	Exhibit I-13
14) Illinois Department of Transportation Authorization #GP3-82N-021 dated 6-17-82	Exhibit I-14
15) Department of the Army, COE NCCCO-RP 8548202 dated 7-9-82	Exhibit I-15
16) Illinois EPA Permit No. 1984-AB-2872 dated 2-24-84	Exhibit I-16
17) Illinois EPA Permit No. 1984-AB-2872-1 dated 11-9-84	Exhibit I-17
18) Illinois EPA Permit No. 1984-AB-2872-2 dated 12-20-85	Exhibit I-18
19) Illinois EPA Permit No. 1984-AB-2872-3 dated 9-23-86	Exhibit I-19
20) Illinois EPA Permit No. 1988-AB-1790 dated 10-21-88	Exhibit I-20
21) Illinois EPA Permit No. 1991-AB-3735 dated 11-1-91	Exhibit I-21
22) Illinois EPA Permit No. 1992-AB-4477 dated 2-6-92	Exhibit I-22
23) Illinois EPA Permit No. 1992-AB-0782 dated 8-6-92	Exhibit I-23
24) Illinois EPA Permit No. 1997-AB-2229 dated 2-25-97	Exhibit I-24

The response to this question was obtained from Lawrence C. Cox, General Manager and from District records including NPDES permit files, sludge permit files, IEPA permit files and Illinois SWB files.

APPENDIX E

APPENDIX E

LARRY COX'S LETTER TO CECIL LUE-HING,
JULY 19, 2004

Downers Grove
Sanitary District

2710 Curtiss Street
P.O. Box 1412
Downers Grove, IL 60515-0703
Phone: 630-969-0664
Fax: 630-969-0827

Providing a Better Environment for South Central DuPage County

July 19, 2004

Mr. Cecil Lue-Hing
6815 County Line Lane
Burr Ridge, IL 60527

Re: Downers Grove Sanitary District
Wastewater Treatment Center
Operational Information and Reports

Dear Mr. Lue-Hing:

We offer the following information in response to your telephone request of June 22, 2004.

1) *Does the District have any operational records for the Wastewater Treatment Center (WWTC) back to 1956? If no, how far back are such records available?*

   Monthly summary reports of operating data are available from 1970 to the present.
   Daily operator log books are available from May, 1984 to the present.
   Daily inspection and reading sheets are available from 2000 to the present.
   Monthly department reports for the WWTC prepared by the District Operations Director are available from January, 1982.

2) *Are there any records of significant operational upsets between 1956 and 1987?*

   No records of operational upsets were found. According to District Operations Director Ralph E. Smith, Jr. there were no significant operational upsets at the WWTC from May 1975 to the present. He is also not aware of any significant upsets from 1956 to 1975.

   In this regard, we have also made available for review by Prakasam Tata the minutes of meetings of the District Board of Trustees from 1921 to the present. We will provide copies of the requested pages in the near future.

3) *Does the District have any records of calculation of detention times in the aeration system from 1956 to the present?*

Average monthly calculations of aeration tank detention time by District personnel for October 1978 through December 2003 are enclosed. No such records could be found for the period before October 1978. These detention times were calculated using the formula contained in the Basis of Design prepared by Baxter & Woodman.

Aeration tank volumes at the District WWTC over the years are provided below. These volumes were calculated from as-built engineering plans for the WWTC.

1956 to 1961 – Aeration tank numbers 1-4 available.
Total volume 86,240 cubic feet.

1962 to 1972 – Aeration tank numbers 1-7 available.
Total volume 156,464 cubic feet.

1972 to 1988 – Aeration tank numbers 1-8 available.
Total volume 283,424 cubic feet.

1988 to present – Aeration tank numbers 1-11 available.
Total volume 537,344 cubic feet.

After your June 18, 2004 tour of the WWTC, you also requested information on the following.

4) *Records of sludge pumped to the lagoons on Curtiss Street.*

A log of dates and volumes of digested sludge pumped to the Curtiss Street lagoons from February 2, 1987 to May 18, 1997 is enclosed. No sludge has been pumped to these lagoons since May 18, 1997. No records of sludge pumping could be found for the period before February 2, 1987.

Our invoice in the amount of $3.90 is enclosed for copying costs.

Please advise if you have any other questions.

Very truly yours,

DOWNERS GROVE SANITARY DISTRICT

Lawrence C. Cox

Lawrence C. Cox
General Manager

Enclosures

Downers Grove Sanitary District
Curtiss Street Lagoons
Digested Sludge Pumping Records

East Lagoon		West Lagoon	
Date	Gallons	Date	Gallons
03/04/88	132,300	05/18/97	52,500
12/01/87	48,000	05/12/97	37,200
12/09/87	150,000	05/05/97	37,200
05/28/87	148,000	04/30/97	74,880
05/21/87	116,000	04/11/97	40,860
04/29/87	152,240	04/07/97	92,400
03/25/87	99,000	03/31/97	110,040
03/12/87	22,000	03/11/97	74,440
03/03/87	144,000	02/25/97	84,000
02/09/87	144,000	02/14/97	69,725
02/04/87	72,000	01/28/97	46,200
02/03/87	250,650	01/23/97	148,260
02/02/87	58,000	01/27/88	20,000
		01/21/88	102,700
		01/14/88	36,000
		01/04/88	315,000
Totals	1,536,190		1,341,405

APPENDIX F

APPENDIX F

WESTON PHASE II SITE ASSESSMENT REPORT, EIP, AUGUST 2002
(PARTIAL)

PHASE II
SITE ASSESSMENT REPORT
ELLSWORTH INDUSTRIAL PARK
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

Prepared for

United States Environmental Protection Agency
Region V
77 West Jackson
Chicago, Illinois 60604

Prepared by:

Weston Solutions, Inc.
750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

August 2002

SECTION 2
BACKGROUND INFORMATION

2.1 SITE DESCRIPTION

The Ellsworth Industrial Park Site is located in Downers Grove, DuPage County, Illinois. The site encompasses the area in which chlorinated-solvent groundwater contamination has been detected in groundwater as shown on Figure 2-1. The approximate boundaries of the site are Burlington Avenue to the north, 63rd Street to the south, Lee and Springside Avenues to the east, and Interstate 355 (I-355) to the west. The site consists of residential, recreational, and commercial/light industry properties. The Ellsworth Industrial Park is located in the northern portion of the site, and it is within this area that the source of the groundwater contamination is suspected. The Ellsworth Industrial Park is bordered on the north by Burlington Avenue; on the south by Elmore and Inverness Avenues; on the east by Belmont Avenue; and on the west by I-355. Figure 2-2 shows the industrial park based on a recent aerial photograph. Figure 2-2 also shows the industrial park subdivided into areas based on industrial properties and investigative work performed.

2.2 SITE HISTORY

2.2.1 Previous Field Investigations

Between spring and fall 2001, the IEPA performed a groundwater investigation on the east side of I-355 near Downers Grove in response to citizen concerns related to recent private-well sampling in neighboring Lisle. The investigation consisted of three rounds of residential-well sampling throughout the area. Approximately 495 private wells were sampled and analyzed for levels of volatile organic chemicals (VOCs). Sample results indicated elevated levels of PCE, TCE, and other related VOCs. Approximately 52% of the samples collected during Round 1 and Round 2 contained PCE or TCE above 5 parts per billion (ppb) (the federal drinking-water standards and the State of ug/L. TCE was also detected in shallow groundwater in this area up to 37 ug/L. Additional work is recommended to evaluate whether a source is present at this facility and determine the extent and magnitude of PCE and TCE contamination in soil and groundwater.

TCE was detected in soil southeast of the main facility and around the Rexnord Filaments Division building at Curtiss and Chase Streets at levels between 7.3 and 230 ug/kg. TCE was detected in shallow groundwater in this area between 18 and 58 ug/L. Further work is recommended to evaluate TCE levels in this area.

Drum storage was also conducted on the north side of the main building. Currently, hazardous waste storage is also conducted in this area. Oil-stained, degraded concrete is prevalent. A soil boring in this area indicated the presence of elevated levels of primarily hydrocarbon constituents. Since PCE/TCE was not detected at significant levels associated within this area of the site, a separate hydrocarbon source is potentially present.

- **WWTP lagoons**- Little information is available about the operation of the former WWTP lagoons on Curtiss Street. The lagoons are potentially unlined and are used for dewatering and storage of sludge from the WWTP. While PCE/TCE were not detected in soil samples collected around the perimeter of the lagoons, TCE was detected at 9.2 ug/L in shallow groundwater on the southwest corner of the lagoons. Additionally, TCE was detected in a Phase I SA shallow groundwater sample at 6 ug/L on the east property line. Shallow groundwater flow direction in this area is not well documented and is expected to be variable. Additional work is recommended to evaluate if TCE observed in shallow groundwater samples at this location is due to potential source material within the lagoons. At a minimum, this should include comprehensive investigation of lagoon sludge and further evaluation of the shallow groundwater chemistry and flow patterns in this area.

5.4.3 Facilities Requiring Further Evaluation

In addition to the probable and potential source facilities identified above, a number of facilities have been identified within the industrial park for which a history of chlorinated-solvent use, documentation of past releases, and/or proximity to probable or potential sources has been documented by U.S. EPA and IEPA; however little or no site-specific data has been collected to date. Additional site evaluation is recommended for these facilities. At this time, these facilities include the following:

Table 4-2
AREA 1
WWTP Property
Soil Sampling Results (VOC's)
Downer's Grove, Illinois

(All units in ug/Kg)

Sample Identification	BD-4	BD-4	GP-13
Depth (feet)	15-17.5	37.5-40	10
Date Sampled	5/31/02	5/31/02	6/19/02
Parameter			
1,1,1 TCA	---	---	---
1,1- DCA	---	---	---
1,1 - DCE	---	---	---
cis -- 1,2 DCE	---	---	---
trans -- 1,2 DCE	---	---	---
Tetrachloroethene (PCE)	---	---	---
Trichloroethene (TCE)	---	---	---
Acetone	17	---	15
2--Butanone	---	---	---
Toluene	52	---	---
1,24- Trimethylbenzene	900	120	---
1,3,5-Trimethylbenzene	370	---	---
Ethyl Benzene	---	---	---
Isopropylbenzene	71	---	---
n-Butylbenzene	61	---	---
m/p xylene	---	---	---
o-xylene	70	---	---
Dichlorodifluoromethane	---	---	---
Iodomethane	---	---	---
Naphthalene	---	---	---
Methylene chloride	---	---	3 J

J - estimated concentration.
--- - not detected.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
SR-6J

October 10, 2002

Mr. Lawrence C. Cox
General Manager
Downers Grove Sanitary District
2710 Curtiss Street
P.O. Box 1412
Downers Grove, Illinois 60515-0703

Re: Technical Review of Site Investigation Work Plan
Downers Grove Sanitary District
Ellsworth Industrial Park, Downers Grove, Illinois

Dear Mr. Cox:

The U.S. EPA, with the support of Weston Solutions, Inc. has completed its review of the above referenced document for the Downers Grove Sanitary District (DGSD), Ellsworth Industrial Park, Downers Grove, Illinois.

Background

The work plan document was prepared by the DGSD to outline proposed investigation activities for sludge lagoon characterization and evaluation of groundwater flow and chemistry in the immediate vicinity of the former wastewater treatment plant (WWTP) lagoons. These activities are being proposed as a result of groundwater contamination documented in monitoring well BD-4(I) located near the southwestern corner of the lagoons. U.S. EPA sampling of this well in June 2002, indicted the presence of trichloroethylene (TCE) at 9.2 ug/L. Confirmation sampling of this well by the DGSD in September 2002, verified the presence of TCE, although at a slightly lower level (5.3 ug/L). Both sampling events indicate TCE is present in groundwater at, or above, the MCL for this constituent.

Up to three distinct groundwater zones are present underlying the Ellsworth Industrial Park and consist of shallowed perched zones, an intermediate water bearing zone, and the bedrock aquifer. Well BD-4(I) is installed in the intermediate water bearing zone at a depth of 47 to 57 feet below ground surface (bgs). Groundwater flow direction within the intermediate zone was found to be complex and variable throughout the industrial park due to complex stratigraphic conditions. Groundwater flow maps developed during the Phase II Site Assessment (SA) indicated flow direction in the vicinity of the lagoons appears to be south-southwest based on limited data points in the area.

Section 2.1 Sludge Quality Characterization: The number of sludge/soil samples to be collected and the method/rationale for lateral sample location criteria are not specified. Since it is not known how sludge was deposited in the lagoons historically, there is a potential for non-uniform conditions to be present. Chlorinated solvent compounds, if present in sludge, may not be uniformly distributed throughout the lagoons in terms of presence and/or concentrations. For this reason, it is recommended that some form of a grid sampling procedure be employed, such that an adequate number of lateral sample locations are selected throughout the lagoons. Additionally, it is recommended that compositing sludge sample locations not be conducted as this may dilute solvent concentrations, if present, and lead to inconclusive results upon completion of sampling efforts.

The work plan indicates sludge and soil samples will be collected every 1.5 feet vertically at each sample location. This should be adequate for vertical evaluation of sludge characteristics, thickness of sludge column, and chemical characteristics of underlying soil. If the sludge column is thicker than anticipated, it is recommended that sampling continue until the sludge soil interface is encountered and an underlying soil sample can be collected for analysis. With respect to vertical sludge sampling, it is not clear whether the DGSD intends to composite sample intervals for analysis. Compositing is not recommended as indicated above.

The headspace screening method described in the work plan appears appropriate; however, compositing of sludge samples is not recommended as indicated above. Headspace screening measurements should be conducted on each discrete sample interval at each location to aid in evaluating heterogeneity and sample selection for laboratory analysis.

Section 2.2.1 Monitoring Well Placement: It is indicated in the work plan that the purpose of additional monitoring well installations is to determine the location, direction, and source of chlorinated solvents documented in BD-4(I). Four wells are proposed along the east and south sides of the DGSD property in the vicinity of the lagoons. Additional objectives cited are to determine groundwater flow direction; determine groundwater quality prior to reaching the DGSD property line; and determine groundwater quality at the DGSD property line. The proposed well locations will aid in achieving the stated objectives; however, it is noted that well placement appears to have been based on assumptions regarding groundwater flow direction which differ from that presented in the U.S. EPA Phase II SA Report. The work plan references potential use of wells SB-15(I) and MW-3(S) in determining groundwater flow direction for the intermediate water bearing zone intersected by BD-4(I) and LD-1(I). Based on hydrostratigraphic data and information obtained during the Phase II SA, monitoring wells SB-15(I) and MW-3(S) are interpreted to be part of shallow perched groundwater zones which are not hydraulically connected to the intermediate groundwater zone. This is clearly evident at the MW-3(S) location where thick low permeability clay deposits are present below the screened interval isolating groundwater from nearby deeper wells. It is less evident in the vicinity of SB-15(I) due to a lack of deeper stratigraphy information between Rexnord and the DGSD property. Based on this interpretation, groundwater elevation data from these wells were not used to formulate the potentiometric surface contour map of the intermediate water bearing zone. Pending any additional hydrostratigraphic data and information, it is not appropriate to use water levels from SB-15(I) or MW-3(S) in determining flow directions for the deeper water bearing zone represented by BD-4(I) and LD-1(I).

Notwithstanding the above described conceptual flow model, the proposed well placements will aid in further evaluating groundwater flow and chemistry characteristics. Placement of wells in the intermediate water bearing zone along the eastern and southern DGSD property lines should allow better evaluation of conditions in the vicinity of the lagoons, especially if groundwater flow direction is found to be towards the lagoons from off-site. However, if groundwater flow direction remains as currently depicted (southwest), it is possible that a DGSD source could still be postulated even if sampling indicates chlorinated solvents are not present in the sludge lagoons, since additional DGSD treatment works would be located in the upgradient direction. For this reason, we recommend that the DGSD consider installation of monitoring point(s) northwest of the lagoons. Alternately, this may be considered as a followup activity based on the results of this investigation.

Due to the complex stratigraphy and presence of potential shallow perched water bearing zones, we recommend that the DGSD also consider collecting groundwater samples from any shallow perched groundwater zones encountered during drilling of the proposed monitoring wells. This will allow a more complete characterization of groundwater flow and chemistry characteristics in the area.

Section 2.2.2 Monitoring Well Construction: The work plan indicates the proposed wells will be installed in the same gravel deposits as LD-1(I). We wish to caution the DGSD that stratigraphy is highly variable over short distances within the Ellsworth Industrial Park and attempting to set screen depth intervals based on other nearby or distant wells may be difficult. By way of example, note that LD-1(I) was drilled to 64 feet bgs and ended in a saturated gravel formation (bedrock was not encountered). However, BD-4(D) located next to BD-4(I) indicates bedrock is present under the lagoons at a depth of approximately 60 feet bgs.

Although not stated, WESTON assumes that borehole drilling and sampling will be conducted using standard split-spoon sampling and logging techniques. Each soil sample collected for logging purposes should be screened using the headspace screening procedure described in Section 2.1 to assess the presence of total volatile organics in the soil column consistent with methods used during the Phase II SA.

Section 2.2.3 Well Development: If any potable water is used during drilling and installation, an equivalent volume should be removed during well development in addition to the 10 well volumes referenced.

Depending on the ultimate formation screened and presence of many fine-grained materials, it may not be possible to obtain water visually clear of sediment as the criteria for when development is considered complete. WESTON recommends also using pH, specific conductance, and temperature field parameters as additional criteria for determining when development is considered complete after the minimum 10 well volumes.

Section 2.2.4 Sampling: Groundwater sampling should occur no sooner than 48 hours after well development to be consistent with Phase II SA investigation procedures.

During purging for groundwater sampling, a minimum three well volumes should be evacuated as described, followed by parameter stabilization measurements (pH, specific conductivity, and temperature) consistent with the Phase II SA.

Data Quality Management: As part of the implementation of this work plan, the U.S. EPA is requesting that all sampling and analyses performed pursuant to this work plan conforms to U.S. EPA guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. The DGSD shall ensure that the laboratories used to perform the analyses participate in a QA/QC program that complies with U.S. EPA guidance, including ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans" (QA/R-2) (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by U.S. EPA. The U.S. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) to meet the quality system requirements.

The U.S. EPA is reemphasizing that the provided work plan is a simple characterization of subsurface conditions at the DGSD property, and is not to be considered a comprehensive study of subsurface conditions at the DGSD property, which is required during Remedial Investigation/Feasability Study (RI/FS) phase for the Ellsworth Industrial Park. Characterization and investigation is an iterative process, so the results of this investigation may indicate that further work is needed.

The U.S. EPA appreciates the opportunity to review and comment on the provided work plan. If you should have any questions, please don't hesitate to contact me at 312/353-8414 or by email at enwiya.mazin@epa.gov.

Sincerely,

Mazin Enwiya, M.S.
Remedial Project Manager

cc: Mark Latham, Gardner, Carton & Douglas
Tom Krueger, U.S. EPA
James Huff, Huff & Huff, Inc.
Kurt Fischer, Weston Solutions, Inc.

nfidential: Submitted For Settlement Purposes

FILE COPY

Huff & Huff
incorporated
environmental engineers
and consultants

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Fax: (708) 579-3526
Website: http://huffnhuff.com

October 17, 2002

Mr. Mazin Enwiya
Remedial Project Manager
U. S. Environmental Protection Agency
Region V
Mail Stop SR-63
77 West Jackson Blvd.
Chicago, IL 60604-3590

Site Investigation Work Plan
Downers Grove Sanitary District
Ellsworth Industrial Park, Downers Grove, IL

Dear Mr. Enwiya:

Thank you for reviewing the Site Investigation Work Plan for the above referenced site. This letter is intended to respond to numerous comments in your review, and to provide formal notice that we will be doing the soil borings and monitoring wells the week of October 28, 2002. In the event the Agency wishes to observe or split samples, you are welcome.

Comments

Section 2.1- Page 2, First Paragraph: The sludge was deposited as a liquid in the lagoons, and as a liquid it would fill the basin, uniformly with depth. To the extent that there are non-uniform conditions in the lagoons, the non-uniformed conditions will be vertical in nature, not horizontal. Therefore, the proposed discrete samples with depth are appropriate. A grid sample is not necessary. Please note that these two lagoons still contain a sludge material that is marginal from a structural perspective, and collecting these samples will be difficult. No compositing of samples is proposed; we will analyze each sample for the COCs.

Section 2.1-Page 2, 2nd Paragraph: The sampling will continue through the sludge column and into the native soil, if physically possible. No compositing of samples is proposed.

Section 2.1-Page 2, 3rd Paragraph: No compositing of samples is proposed.

Section 2.2.1 Monitoring Well Placement: The Agency statement that the shallow perched groundwater zones are not hydraulically connected to the intermediate groundwater zone is not apparent from the existing data. The District's Work Plan was prepared to respond directly to the Agency's reasons for listing the Sanitary District as a PRP; that is the sludge lagoons and the presence of TCE in the intermediate zone. (Despite the soil samples from the soil boring immediately adjacent to the lagoon, BD-4, which did not contain any chlorinated compounds in the two soil samples tested, 15-17.5 ft and 37.5-40 ft.) The District has no reason to add to its costs to investigate the shallow zone, and respectfully declines to add this to the scope of work based on the current knowledge.

According to the Phase II Site Assessment Report, geoprobe samples were collected, both soil and water immediately northeast of the sludge lagoons. The only chlorinated volatile detected was 0.003 mg/L methylene chloride, a common laboratory contaminant. (See Table 4-2.) A water sample collected from 40 to 44 ft below ground surface in this same geoprobe did not contain any detectable chlorinated solvents. (See Table 4-4.) If the chlorinated solvents were originating from the main part of the wastewater treatment plant to the north of the lagoons, then this geoprobe would have detected these compounds. Based on these results, the District respectfully declines to install an additional monitoring well to the northwest of the lagoons, under some unsupported theory that the main plant may be the source.

Section 2.2.2 Monitoring Well Construction: Standard split-spoon sampling and logging will be used, and at the Agency's request, we will field screen all soil samples with a photo-ionization detector. The well screen intervals will be based on geology, not on an arbitrary depth.

Section 2.2.3 Well Development: Water use is not planned during monitoring well installation. The use of pH, specific conductance and temperature after removal of 10-well volumes has nothing to do with silt removal, which is the purpose of development. Our experience is that all three of these parameters stabilize long before 10-well volumes are removed, and long before the turbidity is removed. Despite our experience that this is an unnecessary protocol (and cost), we will monitor these parameters to assure they stabilize after ten well volumes.

Section 2.2.4 Sampling: Groundwater sampling will occur no sooner than 48 hours after well development. The pH, specific conductivity and temperature will be monitored and stabilized before sampling.

Data Quality Management: a Nationally Accredited Laboratory will analyze the samples.

Again I want to thank Weston and the Agency for your review of the Work Plan.

Sincerely;

James E. Huff

James E. Huff, P.E.

APPENDIX G

APPENDIX G

U.S. EPA PRP NOTICE LETTER, AUGUST 1, 2002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 0 1 2002

REPLY TO THE ATTENTION OF

GENERAL NOTICE LETTER
URGENT LEGAL MATTER -- PROMPT REPLY NECESSARY
CERTIFIED MAIL: RETURN RECEIPT REQUESTED

(ADDRESSEES ON ATTACHED SERVICE LIST)

Re: Ellsworth Industrial Park Site
Wisconsin Avenue
Downers Grove, DuPage County, Illinois
(the "Site")

Dear Sir:

This letter notifies you of potential liability, as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9607(a), as amended (CERCLA), that you may incur or may have incurred with respect to the above referenced Site. This letter also notifies you of potential response activities at the Site, which you are being asked to perform or finance.

NOTICE OF POTENTIAL LIABILITY

The United States Environmental Protection Agency (U.S. EPA) has documented the release or threatened release of hazardous substances, pollutants, or contaminants at the above-referenced Site. U.S. EPA has spent, or is considering spending, public funds on actions to investigate and control such releases or threatened releases at the Site. Unless EPA reaches an agreement under which a potentially liable party or parties will properly perform or finance such action, U.S. EPA may perform these actions pursuant to Sections 104 and 106 of CERCLA.

Under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. Sections 9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6973, as amended

(RCRA), and other laws, potentially liable parties may be ordered to perform response actions deemed necessary by U.S. EPA to protect the public health, welfare or the environment, and may be liable for all costs incurred by the government in responding to any release or threatened release at the Site. Such actions and costs may include, but are not limited to, expenditures for conducting a Remedial Investigation/Feasibility Study (RI/FS), conducting a Remedial Design/Remedial Action RD/RA, and other investigations, planning, response oversight, and enforcement activities. In addition, potentially liable parties may be required to pay for damages for injury to, destruction of or loss of natural resources, including the cost of assessing such damages.

U.S. EPA has evaluated information in connection with the investigation of the Site. Based on this information, U.S. EPA believes that you may be a potentially responsible party (PRP) with respect to this Site. Potentially responsible parties under CERCLA include current and former owners and operators of the Site as well as persons who arranged for disposal or treatment of hazardous substances sent to the Site, or persons who accepted hazardous substances for transport to the Site.

By this letter, U.S. EPA notifies you of your potential liability with regard to this matter and encourages you to voluntarily perform or finance those response activities that U.S. EPA determines are necessary at the Site. In accordance with CERCLA and other authorities, U.S. EPA has already undertaken certain actions and incurred certain costs in response to conditions at the Site. These response actions include the initial investigation and assessment of contamination at the Site. U.S. EPA may expend additional funds for response activities at the Site under the authority of CERCLA and other laws.

POTENTIAL FUTURE SPECIAL NOTICE AND NEGOTIATION MORATORIUM

You may receive an additional notice from U.S. EPA in the future. That notice would either inform you that U. S. EPA is using the CERCLA Section 122(e) special notice procedures to formally negotiate terms of a consent order or consent decree to conduct or finance site response activities, or it would inform you that U.S. EPA is not using such procedures pursuant to Section 122(a). If U.S. EPA does not use Section 122(e) special notice procedures, the notice would specify why the special notice procedures were not appropriate in this case.

Under Section 122(e), U.S. EPA has the discretionary authority to use the special notice procedures if U.S. EPA determines that such procedures would facilitate an agreement between U.S. EPA and the PRPs and would expedite remedial action at the site. Use of the special notice procedures triggers a moratorium on certain U.S. EPA activities at the site. The purpose of the moratorium is to provide a period of time when PRPs and U.S. EPA may enter into formal negotiations for PRP conduct or financing of the response activities at the site.

If the U.S. EPA uses a Special Notice letter, the initial moratorium for the RI/FS will last for 60 days after the notice. If U.S. EPA determines that an offer to perform or finance the activities is submitted by the PRPs within those 60 days, and that the offer is a good faith offer, a 30 day extension will be provided pursuant to statute for further negotiations. After completion of the RI/FS and issuance of a Record of Decision (ROD) documenting U.S. EPA's selection of a Remedial Action for the Site, the U.S. EPA may issue a Special Notice letter for RD/RA negotiations. That letter will initiate a moratorium for the RD/RA that will last for 60 days after the notice. If U.S. EPA determines that an offer is submitted by the PRPs within those 60 days, and that the offer is a good faith offer, a 60 day extension will be provided pursuant to statute for further negotiations.

If U.S. EPA determines that a good faith offer has not been submitted within the first 60 days of the moratorium period, U.S. EPA may terminate the negotiation moratorium under Section 122(e)(4) of CERCLA. U.S. EPA then may commence such cleanup or enforcement actions as it deems appropriate. In the absence of an agreement with the parties to perform or finance the necessary cleanup activities, U.S. EPA may undertake these activities and pursue civil litigation against the parties for reimbursement of site expenditures. Alternatively, U.S. EPA may issue an administrative order pursuant to Section 106(a) of CERCLA to require PRPs to commence cleanup activities, or may commence civil litigation pursuant to Section 106(a) of CERCLA to obtain similar relief. Failure to comply with an administrative order issued under Section 106(a) of CERCLA may result in a fine of up to $27,500 per day, under Section 106(b) of CERCLA, or imposition of treble damages, under section 107(c)(3).

SITE RESPONSE ACTIVITIES

At present, U.S. EPA expects that the following response actions, at a minimum, will be necessary at the site as soon as possible:

1. Remedial Investigation (RI) to identify the site characteristics and to define the nature and extent of soil, air, surface water, and groundwater contamination at the Site and risks posed by the Site.

2. Feasibility Study (FS) to evaluate alternative remedial actions to remove, treat, or contain hazardous substances, pollutants, and contaminants at the Site.

INFORMATION TO ASSIST RESPONSIBLE PARTIES

U.S. EPA would like to encourage good faith negotiations between the PRPs and U.S. EPA, as well as among the PRPs. To assist PRPs in preparing a proposal and in negotiating with U.S. EPA concerning this matter, U.S. EPA is:

1. Attaching a list of names and addresses of PRPs to whom this notification is being sent. This list represents EPA's preliminary findings on the identities of PRPs. Inclusion on, or exclusion from, the list does not constitute a final determination

by U.S. EPA concerning the liability of any party for the release or threat of release of hazardous substances at the site.

2. Calling a meeting for Tuesday, August 20, 2002, at 9:30 a.m., in the Steppenwolf Room at the Hotel Allegro Chicago located at 171 West Randolph Street, Chicago, Illinois, at which U.S. EPA and Illinois EPA will: (a) summarize the sampling data gathered at the Site to date; (b) provide copies of any available sampling reports; and (c) provide background information on the potential sources of chlorinated solvent contamination in soil and ground water at the Site.

PRP STEERING COMMITTEE

U.S. EPA recommends that all PRPs meet to select a steering committee responsible for representing the group's interests. Establishing a manageable group is critical for successful negotiations with U.S. EPA. The PRPs will be able to use the meeting room after the conclusion of U.S. EPA's presentation on August 20, 2002. Alternatively, U.S. EPA encourages each PRP to select one person from its company or organization who will represent its interests.

ADMINISTRATIVE RECORD

Pursuant to CERCLA Section 113(k), EPA must establish an administrative record that contains documents that form the basis of EPA's decision on the selection of a response action for a site. The administrative record files, which contain the documents related to the response action selected for this site, will be available to the public for inspection and comment. The primary location is generally the EPA Regional office. Details on the contents and availability of this record will be provided at the August 20, 2002, meeting.

PRP RESPONSE AND EPA CONTACT

You are requested to contact U.S. EPA within 30 days of your receipt of this letter to indicate your willingness to perform or finance an RI/FS at the Site. You may respond individually or through a steering committee if such a committee has been formed.

If you have any questions pertaining to this letter, please contact or direct your attorney to contact Thomas Krueger, Associate Regional Counsel, at (312) 886-0562.

Sincerely,

Wm. E. Muno

William E. Muno, Director
Superfund Division

Enclosure

cc: (Letter and all Enclosures)
Fred Nika, IEPA
Office of Illinois Attorney General
Natural Resources Damages Trustees

SERVICE LIST

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c/o John W. Loseman
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Ames Supply Company
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Arrow Gear
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Downers Grove Sanitary District
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Downers Grove, IL 60515-0703
fax: (630) 969-0827

Fusibond
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Downers Grove, IL 60515
fax: (630) 969-2355

Liberty Copper & Wire
c/o Litton Systems, Inc.
Jill M. Palmer
Northrop Grumman Corp.
Washington Office
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Arlington, VA 22209-2278
fax: (703) 351-8311

Lindy Manufacturing Company
David A. Collins, President
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fax: (630) 963-5308

Magnetrol International, Inc.
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Molex
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Security/Safety Manager
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Precision Brand Products, Inc.
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Rexnord Corporation
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McDermott, Will & Emery
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Rexnord Corporation
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Downers Grove, IL 60515
fax: (630) 969-8827

Scot Incorporated
c/o Anthony Navitsky, Vice President and CFO
Randy Slaboch, Director of Operations
2525 Curtiss Street
Downers Grove, IL 60515
fax: (630) 969-4719

Suburban Self Storage
2333 Wisconsin Avenue
Downers Grove, IL 60515

Tricon Industries, Inc.
Corporate Headquarters
Ralph Grandle, President
1600 Eisenhower Lane, #200
Lisle, IL 60532
fax: (630) 963-0597

White Lake Building Corporation
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Downers Grove, IL 60515
fax: (630) 964-0497

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

FAX COVER SHEET

ELLSWORTH INDUSTRIAL PARK SITE

NOTICE

It is U.S. EPA's standard practice to issue a press release soon after it issues Superfund notice letters. As a result, you may receive calls concerning this matter within the next few days.

APPENDIX H

APPENDIX H

U.S. EPA COMMENTS ON PROPOSED SAMPLING PLAN, OCTOBER 10, 2002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
SR-6J

October 10, 2002

Mr. Lawrence C. Cox
General Manager
Downers Grove Sanitary District
2710 Curtiss Street
P.O. Box 1412
Downers Grove, Illinois 60515-0703

Re: Technical Review of Site Investigation Work Plan
Downers Grove Sanitary District
Ellsworth Industrial Park, Downers Grove, Illinois

Dear Mr. Cox:

The U.S. EPA, with the support of Weston Solutions, Inc. has completed its review of the above referenced document for the Downers Grove Sanitary District (DGSD), Ellsworth Industrial Park, Downers Grove, Illinois.

Background

The work plan document was prepared by the DGSD to outline proposed investigation activities for sludge lagoon characterization and evaluation of groundwater flow and chemistry in the immediate vicinity of the former wastewater treatment plant (WWTP) lagoons. These activities are being proposed as a result of groundwater contamination documented in monitoring well BD-4(I) located near the southwestern corner of the lagoons. U.S. EPA sampling of this well in June 2002, indicted the presence of trichloroethylene (TCE) at 9.2 ug/L. Confirmation sampling of this well by the DGSD in September 2002, verified the presence of TCE, although at a slightly lower level (5.3 ug/L). Both sampling events indicate TCE is present in groundwater at, or above, the MCL for this constituent.

Up to three distinct groundwater zones are present underlying the Ellsworth Industrial Park and consist of shallowed perched zones, an intermediate water bearing zone, and the bedrock aquifer. Well BD-4(I) is installed in the intermediate water bearing zone at a depth of 47 to 57 feet below ground surface (bgs). Groundwater flow direction within the intermediate zone was found to be complex and variable throughout the industrial park due to complex stratigraphic conditions. Groundwater flow maps developed during the Phase II Site Assessment (SA) indicated flow direction in the vicinity of the lagoons appears to be south-southwest based on limited data points in the area.

Section 2.1 Sludge Quality Characterization: The number of sludge/soil samples to be collected and the method/rationale for lateral sample location criteria are not specified. Since it is not known how sludge was deposited in the lagoons historically, there is a potential for non-uniform conditions to be present. Chlorinated solvent compounds, if present in sludge, may not be uniformly distributed throughout the lagoons in terms of presence and/or concentrations. For this reason, it is recommended that some form of a grid sampling procedure be employed, such that an adequate number of lateral sample locations are selected throughout the lagoons. Additionally, it is recommended that compositing sludge sample locations not be conducted as this may dilute solvent concentrations, if present, and lead to inconclusive results upon completion of sampling efforts.

The work plan indicates sludge and soil samples will be collected every 1.5 feet vertically at each sample location. This should be adequate for vertical evaluation of sludge characteristics, thickness of sludge column, and chemical characteristics of underlying soil. If the sludge column is thicker than anticipated, it is recommended that sampling continue until the sludge soil interface is encountered and an underlying soil sample can be collected for analysis. With respect to vertical sludge sampling, it is not clear whether the DGSD intends to composite sample intervals for analysis. Compositing is not recommended as indicated above.

The headspace screening method described in the work plan appears appropriate; however, compositing of sludge samples is not recommended as indicated above. Headspace screening measurements should be conducted on each discrete sample interval at each location to aid in evaluating heterogeneity and sample selection for laboratory analysis.

Section 2.2.1 Monitoring Well Placement: It is indicated in the work plan that the purpose of additional monitoring well installations is to determine the location, direction, and source of chlorinated solvents documented in BD-4(I). Four wells are proposed along the east and south sides of the DGSD property in the vicinity of the lagoons. Additional objectives cited are to determine groundwater flow direction; determine groundwater quality prior to reaching the DGSD property line; and determine groundwater quality at the DGSD property line. The proposed well locations will aid in achieving the stated objectives; however, it is noted that well placement appears to have been based on assumptions regarding groundwater flow direction which differ from that presented in the U.S. EPA Phase II SA Report. The work plan references potential use of wells SB-15(I) and MW-3(S) in determining groundwater flow direction for the intermediate water bearing zone intersected by BD-4(I) and LD-1(I). Based on hydrostratigraphic data and information obtained during the Phase II SA, monitoring wells SB-15(I) and MW-3(S) are interpreted to be part of shallow perched groundwater zones which are not hydraulically connected to the intermediate groundwater zone. This is clearly evident at the MW-3(S) location where thick low permeability clay deposits are present below the screened interval isolating groundwater from nearby deeper wells. It is less evident in the vicinity of SB-15(I) due to a lack of deeper stratigraphy information between Rexnord and the DGSD property. Based on this interpretation, groundwater elevation data from these wells were not used to formulate the potentiometric surface contour map of the intermediate water bearing zone. Pending any additional hydrostratigraphic data and information, it is not appropriate to use water levels from SB-15(I) or MW-3(S) in determining flow directions for the deeper water bearing zone represented by BD-4(I) and LD-1(I).

Notwithstanding the above described conceptual flow model, the proposed well placements will aid in further evaluating groundwater flow and chemistry characteristics. Placement of wells in the intermediate water bearing zone along the eastern and southern DGSD property lines should allow better evaluation of conditions in the vicinity of the lagoons, especially if groundwater flow direction is found to be towards the lagoons from off-site. However, if groundwater flow direction remains as currently depicted (southwest), it is possible that a DGSD source could still be postulated even if sampling indicates chlorinated solvents are not present in the sludge lagoons, since additional DGSD treatment works would be located in the upgradient direction. For this reason, we recommend that the DGSD consider installation of monitoring point(s) northwest of the lagoons. Alternately, this may be considered as a followup activity based on the results of this investigation.

Due to the complex stratigraphy and presence of potential shallow perched water bearing zones, we recommend that the DGSD also consider collecting groundwater samples from any shallow perched groundwater zones encountered during drilling of the proposed monitoring wells. This will allow a more complete characterization of groundwater flow and chemistry characteristics in the area.

<u>Section 2.2.2 Monitoring Well Construction</u>: The work plan indicates the proposed wells will be installed in the same gravel deposits as LD-1(I). We wish to caution the DGSD that stratigraphy is highly variable over short distances within the Ellsworth Industrial Park and attempting to set screen depth intervals based on other nearby or distant wells may be difficult. By way of example, note that LD-1(I) was drilled to 64 feet bgs and ended in a saturated gravel formation (bedrock was not encountered). However, BD-4(D) located next to BD-4(I) indicates bedrock is present under the lagoons at a depth of approximately 60 feet bgs.

Although not stated, WESTON assumes that borehole drilling and sampling will be conducted using standard split-spoon sampling and logging techniques. Each soil sample collected for logging purposes should be screened using the headspace screening procedure described in Section 2.1 to assess the presence of total volatile organics in the soil column consistent with methods used during the Phase II SA.

<u>Section 2.2.3 Well Development</u>: If any potable water is used during drilling and installation, an equivalent volume should be removed during well development in addition to the 10 well volumes referenced.

Depending on the ultimate formation screened and presence of many fine-grained materials, it may not be possible to obtain water visually clear of sediment as the criteria for when development is considered complete. WESTON recommends also using pH, specific conductance, and temperature field parameters as additional criteria for determining when development is considered complete after the minimum 10 well volumes.

<u>Section 2.2.4 Sampling</u>: Groundwater sampling should occur no sooner than 48 hours after well development to be consistent with Phase II SA investigation procedures.

During purging for groundwater sampling, a minimum three well volumes should be evacuated as described, followed by parameter stabilization measurements (pH, specific conductivity, and temperature) consistent with the Phase II SA.

Data Quality Management: As part of the implementation of this work plan, the U.S. EPA is requesting that all sampling and analyses performed pursuant to this work plan conforms to U.S. EPA guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. The DGSD shall ensure that the laboratories used to perform the analyses participate in a QA/QC program that complies with U.S. EPA guidance, including ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans" (QA/R-2) (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by U.S. EPA. The U.S. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) to meet the quality system requirements.

The U.S. EPA is reemphasizing that the provided work plan is a simple characterization of subsurface conditions at the DGSD property, and is not to be considered a comprehensive study of subsurface conditions at the DGSD property, which is required during Remedial Investigation/Feasability Study (RI/FS) phase for the Ellsworth Industrial Park. Characterization and investigation is an iterative process, so the results of this investigation may indicate that further work is needed.

The U.S. EPA appreciates the opportunity to review and comment on the provided work plan. If you should have any questions, please don't hesitate to contact me at 312/353-8414 or by email at enwiya.mazin@epa.gov.

Sincerely,

Mazin M. Enwiya

Mazin Enwiya, M.S.
Remedial Project Manager

cc: Mark Latham, Gardner, Carton & Douglas
Tom Krueger, U.S. EPA
James Huff, Huff & Huff, Inc.
Kurt Fischer, Weston Solutions, Inc.

APPENDIX I

APPENDIX I

HUFF & HUFF, RESPONSE TO U.S. EPA, OCTOBER 17, 2006

Confidential: Submitted For Settlement Purposes

Huff & Huff
incorporated
environmental engineers
and consultants

FILE COPY

512 W. Burlington Avenue, Suite 100
LaGrange, IL 60525
Phone: (708) 579-5940
Fax: (708) 579-3526
Website: http://huffnhuff.com

October 17, 2002

Mr. Mazin Enwiya
Remedial Project Manager
U. S. Environmental Protection Agency
Region V
Mail Stop SR-63
77 West Jackson Blvd.
Chicago, IL 60604-3590

Site Investigation Work Plan
Downers Grove Sanitary District
Ellsworth Industrial Park, Downers Grove, IL

Dear Mr. Enwiya:

Thank you for reviewing the Site Investigation Work Plan for the above referenced site. This letter is intended to respond to numerous comments in your review, and to provide formal notice that we will be doing the soil borings and monitoring wells the week of October 28, 2002. In the event the Agency wishes to observe or split samples, you are welcome.

Comments

Section 2.1- Page 2, First Paragraph: The sludge was deposited as a liquid in the lagoons, and as a liquid it would fill the basin, uniformly with depth. To the extent that there are non-uniform conditions in the lagoons, the non-uniformed conditions will be vertical in nature, not horizontal. Therefore, the proposed discrete samples with depth are appropriate. A grid sample is not necessary. Please note that these two lagoons still contain a sludge material that is marginal from a structural perspective, and collecting these samples will be difficult. No compositing of samples is proposed; we will analyze each sample for the COCs.

Section 2.1-Page 2, 2nd Paragraph: The sampling will continue through the sludge column and into the native soil, if physically possible. No compositing of samples is proposed.

Section 2.1-Page 2, 3rd Paragraph: No compositing of samples is proposed.

Section 2.2.1 Monitoring Well Placement: The Agency statement that the shallow perched groundwater zones are not hydraulically connected to the intermediate groundwater zone is not apparent from the existing data. The District's Work Plan was prepared to respond directly to the Agency's reasons for listing the Sanitary District as a PRP; that is the sludge lagoons and the presence of TCE in the intermediate zone. (Despite the soil samples from the soil boring immediately adjacent to the lagoon, BD-4, which did not contain any chlorinated compounds in the two soil samples tested, 15-17.5 ft and 37.5-40 ft.) The District has no reason to add to its costs to investigate the shallow zone, and respectfully declines to add this to the scope of work based on the current knowledge.

According to the Phase II Site Assessment Report, geoprobe samples were collected, both soil and water immediately northeast of the sludge lagoons. The only chlorinated volatile detected was 0.003 mg/L methylene chloride, a common laboratory contaminant. (See Table 4-2.) A water sample collected from 40 to 44 ft below ground surface in this same geoprobe did not contain any detectable chlorinated solvents. (See Table 4-4.) If the chlorinated solvents were originating from the main part of the wastewater treatment plant to the north of the lagoons, then this geoprobe would have detected these compounds. Based on these results, the District respectfully declines to install an additional monitoring well to the northwest of the lagoons, under some unsupported theory that the main plant may be the source.

Section 2.2.2 Monitoring Well Construction: Standard split-spoon sampling and logging will be used, and at the Agency's request, we will field screen all soil samples with a photo-ionization detector. The well screen intervals will be based on geology, not on an arbitrary depth.

Section 2.2.3 Well Development: Water use is not planned during monitoring well installation. The use of pH, specific conductance and temperature after removal of 10-well volumes has nothing to do with silt removal, which is the purpose of development. Our experience is that all three of these parameters stabilize long before 10-well volumes are removed, and long before the turbidity is removed. Despite our experience that this is an unnecessary protocol (and cost), we will monitor these parameters to assure they stabilize after ten well volumes.

Section 2.2.4 Sampling: Groundwater sampling will occur no sooner than 48 hours after well development. The pH, specific conductivity and temperature will be monitored and stabilized before sampling.

Data Quality Management: a Nationally Accredited Laboratory will analyze the samples.

Again I want to thank Weston and the Agency for your review of the Work Plan.

Sincerely;

James E. Huff, P.E.

APPENDIX J

APPENDIX J

HUFF & HUFF, SITE INVESTIGATION REPORT ON THE DGSD SEWAGE LAGOON AREA, DECEMBER 13, 2002 (PARTIAL)

SITE INVESTIGATION
REPORT ON THE
DOWNERS GROVE SANITARY DISTRICT'S
SEWAGE LAGOON AREA

2710 CURTISS STREET
DOWNERS GROVE, ILLINOIS

Prepared for

Gardner, Carton & Douglas
321 North Clark
Chicago, Illinois

CONFIDENTIAL: Submitted for Settlement Purposes Only

December 13, 2002

Prepared by

James E. Huff, P.E.

HUFF & HUFF, INC.
ENVIRONMENTAL CONSULTANTS
LaGRANGE, ILLINOIS

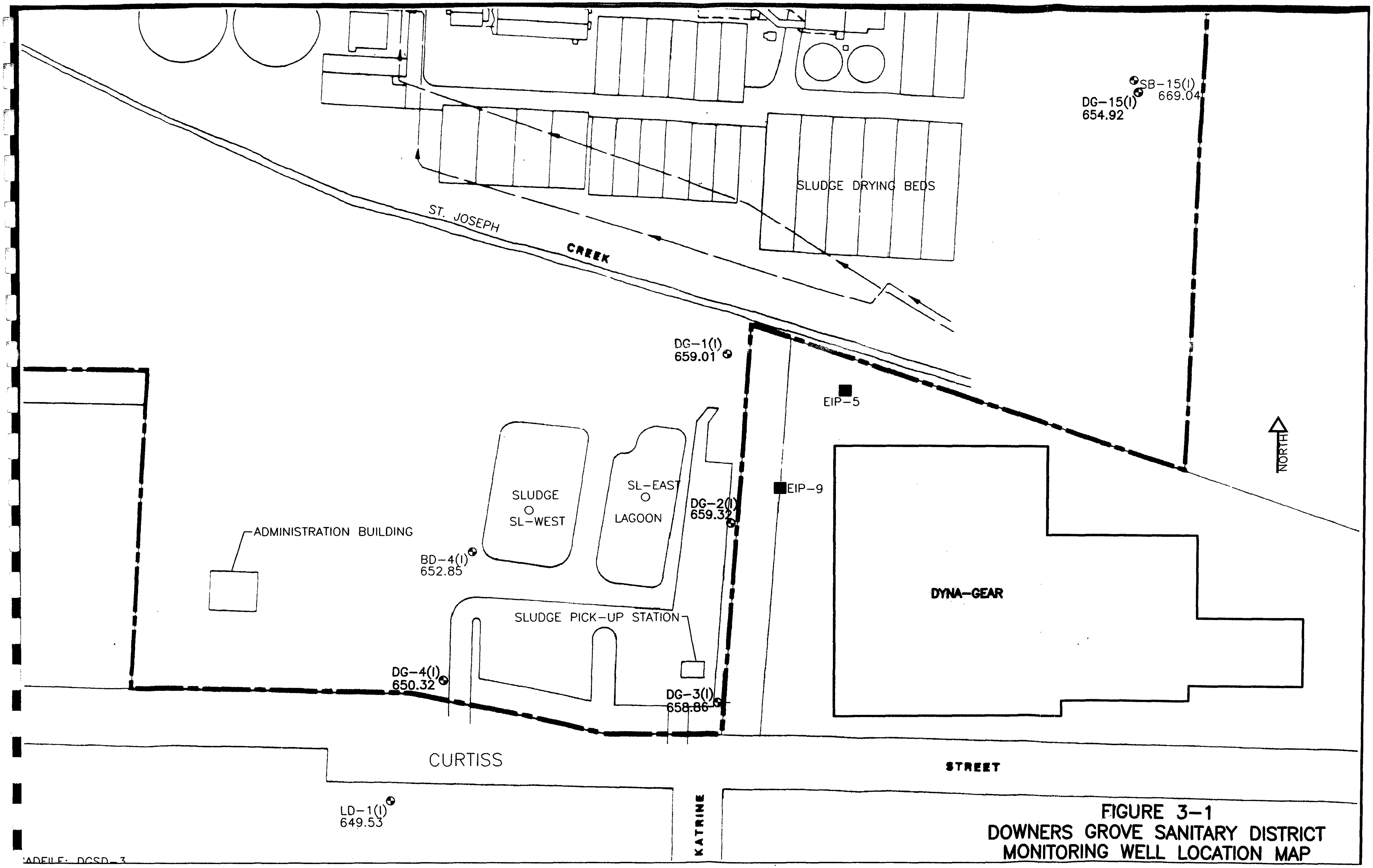

FIGURE 3-1
DOWNERS GROVE SANITARY DISTRICT
MONITORING WELL LOCATION MAP

TABLE 3-2
DOWNERS GROVE OVERBURDEN WELL BD-4(I)
CHLORINATED SOLVENT RESULTS

	----------------------------mg/L----------------------------			
Date	06/18/2002	09/05/2002	09/05/2002 dup	11/12/2002
1,1,1-Trichloroethane	**0.0012**	<0.0003	<0.0003	<0.0020
1,1-Dichloroethane	<0.0010	<0.0002	<0.0002	<0.0050
1,1,-Dichloroethylene	<0.0010	<0.0003	<0.0003	<0.0020
Chloroethane	<0.0010	<0.0005	<0.0005	<0.0050
Percloroethylene	**0.0005**	<0.0004	<0.0004	<0.0020
Trichloroethylene	**0.0092**	**0.0053**	**0.0050**	**0.0086**
cis-1,2-Dichloroethylene	<0.0010	<0.0020	<0.0020	<0.0020
Vinyl chloride	<0.0010	<0.0004	<0.0004	<0.0002

Detected Compounds Bolded

TABLE 3-3
DOWNERS GROVE SANITARY DISTRICT
MONITORING WELL RESULTS-NOVEMBER 12, 15, 2002
mg/L

Contaminant	DG-15(I)	SB-15(I)	DG-1(I)	DG-2(I)	DG-3(I)	DG-3(I) Dup	DG-4(I)	BD-4(I)	LD-1(I)
1,1,1-Trichloroethane	<0.002	<0.002	<0.002	**0.004**	<0.002	<0.002	<0.002	<0.002	<0.002
1,1-Dichloroethane	<0.005	<0.005	<0.005	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chloroethane	<0.005	<0.005	<0.005	<0.005	**0.007**	<0.005	<0.005	<0.005	<0.005
Perchloroethylene	<0.003	<0.003	<0.003	<0.003	<0.002	<0.002	<0.002	<0.002	<0.002
Trichloroethylene	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	**0.009**	<0.002
cis-1,2-Dichloroethylene	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Vinyl chloride	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002

Detected Compounds Bolded

APPENDIX K

APPENDIX K

HUFF & HUFF, LETTER REPORT ON MONITORING WELL RESULTS, DECEMBER 10, 2003 (PARTIAL)

Huff & Huff
incorporated
environmental engineers
and consultants

FILE COPY

512 W. Burlington Avenue, Suite 100
LaGrange, IL 60525
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Fax: (708) 579-3526
Website: http://huffnhuff.com

December 10, 2003

Mr. Mark Latham
Gardner, Carton & Douglas
191 North Wacker Drive
Suite 3700
Chicago, IL 60606

Re: October Sampling Results
Downers Grove Sanitary District
Monitoring Results

Dear Mark:

On October 23, 2003, we sampled the monitoring well network in the southeast portion of the District's property. We included the three new wells we had recently installed. Enclosed please find the tables of results, figures depicting the monitoring well locations and shallow zone groundwater flow, cross sections of the geology and groundwater elevations, and the analytical data sheets. The additional wells has clarified somewhat the groundwater flow directions.

I will attempt to summarize my observations from the data.

- There appears to be at least two groundwater zones; one in the sand/gravel above the silt layer, and the second in the silt layer (and sand layer that sometimes is present beneath the silt and above the bedrock).
- The shallower zone appears to have a generally south flow direction, with a ten foot drop in elevation across the site. The deeper zone is flatter, with a 2.6 ft variance in the four deeper screened wells.
- At DG-1(I) we were successful in punching through a large cobble, and installed DG-1(D) below the cobble, partially into the silt. The water quality in these two wells were similar, and essentially void of volatiles (VOCs). (Trichloroethylene (TCE) was detected in both samples as well as the lab's blank. Perchloroethylene (PCE) was detected in DG-1(D) at 0.0026 mg/L, but was also reported in the trip blank (0.0014 mg/L) and in the field blank (0.0016 mg/L).
- DG-2(I) and DG-3(I) along the east property line continue to have VOCs. In DG-2(I), 1,1,1-trichloroethane (TCA) at 0.0041 mg/L was present, along with its product of

degradation, 1,1-dichloroethane (1,1-DCA) at 0.0127 mg/L. DG-3(I) further south contained the 1,1-DCA (0.0089 mg/L) and a product of further degradation chloroethane (0.0053 mg/L). DG-3(I) also contained cis-1,2-dichloroethylene (DCE) at 0.0006 mg/L and vinyl chloride at 0.0033 mg/L.

- DG-5(I) drilled north of DG-2(1) was screened to the top of bedrock, similar to DG-2(I). However, DG-5(I)'s screen is totally contained within the silt and deeper sand, while DG-2(I)'s silt layer was smaller so it is also screened into the higher sand. DG-5(I) was void of VOCs except for PCE at 0.0019 mg/L, which was present in the trip blank and field blank.
- BD-4(1) which is screened into the silt and lower sands contained 0.0043 mg/L TCE, the lowest level recorded level to date, and 0.0011 mg/L TCA, similar to previous levels.
- DG-6(I) installed northwest of the sludge lagoons was void of VOCs, except for the PCE previously noted as suspect.

Hopefully we will be able to install two wells on the adjacent property to the east before the next sampling round. Based on the results to date, we will screen these wells above the silt layer.

Please call if you have any questions.

Sincerely,

James E. Huff

James E. Huff, P.E.

cc: Larry Cox, Downers Grove Sanitary District

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TABLE 1
DOWNERS GROVE OVERBURDEN WELL BD-4(I)
CHLORINATED SOLVENT RESULTS

	mg/L					
Date	06/18/2002	09/05/2002	11/12/2002	03/25/2003	06/24/2003	10/23/2003
1,1,1-Trichloroethane	**0.0012**	<0.0003	<0.0020	**0.0011**	**0.0010**	**0.0011**
1,1-Dichloroethane	<0.0010	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002
1,1,-Dichloroethylene	<0.0010	<0.0003	<0.0020	<0.0003	<0.0003	<0.0003
Chloroethane	<0.0010	<0.0005	<0.0050	<0.0005	<0.0005	<0.0005
Percloroethylene	**0.0005**	<0.0004	<0.0020	<0.0004	**0.0004**	**0.0021** a/
Trichloroethylene	**0.0092**	**0.0053**	**0.0086**	**0.0113**	**0.0090**	**0.0043**
cis-1,2-Dichloroethylene	<0.0010	<0.0020	<0.0020	<0.0003	<0.0003	<0.0003
Vinyl chloride	<0.0010	<0.0004	<0.0002	<0.0004	<0.0004	<0.0004

Detected Compounds Bolded

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L) and Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]BD-4(I)

TABLE 2
DOWNERS GROVE OVERBURDEN WELL DG-5(I)
CHLORINATED SOLVENT RESULTS

Date	10/23/2003 mg/L
1,1,1-Trichloroethane	<0.0003
1,1-Dichloroethane	<0.0002
1,1,-Dichloroethylene	<0.0003
Chloroethane	<0.0005
Percloroethylene	**0.0019** a/
Trichloroethylene	<0.0003
cis-1,2-Dichloroethylene	<0.0003
Vinyl chloride	<0.0004

Detected Compounds Bolded
B = Analyte detected in associated method blank.
a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L)
and in Field Blank (0.0016 mg/L)
R:\Downers Gr San Dist\[DG Tables.xls]DG-5(I)

TABLE 3
DOWNERS GROVE OVERBURDEN WELL DG-6(I)
CHLORINATED SOLVENT RESULTS

Date	mg/L 10/23/2003
1,1,1-Trichloroethane	<0.0003
1,1-Dichloroethane	<0.0002
1,1,-Dichloroethylene	<0.0003
Chloroethane	<0.0005
Percloroethylene	**0.0017** [a/]
Trichloroethylene	<0.0003
cis-1,2-Dichloroethylene	<0.0003
Vinyl chloride	<0.0004

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L)
and Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-6(I)

TABLE 4
DOWNERS GROVE OVERBURDEN WELL DG-1(I)
CHLORINATED SOLVENT RESULTS

	mg/L			
Date	11/12/2002	03/25/2003	06/24/2003	10/23/2003
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003
1,1-Dichloroethane	<0.0050	<0.0002	<0.0002	<0.0002
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0002	<0.0003
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005
Percloroethylene	<0.0030	<0.0004	<0.0004	<0.0004
Trichloroethylene	<0.0020	<0.0003	**0.0003 B**	**0.0042 JB**
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004

Detected Compounds Bolded

B = Analyte detected in associated method blank.

J= Analyte detected below quantitative limits

R:\Downers Gr San Dist\[DG Tables.xls]DG-1(1)

TABLE 5
DOWNERS GROVE OVERBURDEN WELL DG-1(D)
CHLORINATED SOLVENT RESULTS

Date	mg/L 10/23/03	
1,1,1-Trichloroethane	<0.0003	
1,1-Dichloroethane	<0.0002	
1,1,-Dichloroethylene	<0.0003	
Chloroethane	<0.0005	
Percloroethylene	**0.0026**	a/
Trichloroethylene	**0.0042**	JB
cis-1,2-Dichloroethylene	<0.0003	
Vinyl chloride	<0.0004	

Detected Compounds Bolded

B = Analyte detected in associated method blank.

J= Analyte detected below quantitative limits

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L) and Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-1(D)

TABLE 6
DOWNERS GROVE OVERBURDEN WELL DG-2(I)
CHLORINATED SOLVENT RESULTS

	mg/L			
Date	11/12/2002	03/25/2003	06/24/2003	10/23/2003
1,1,1-Trichloroethane	**0.0040**	**0.0047**	**0.0059**	**0.0041**
1,1-Dichloroethane	**0.0110**	**0.0090**	**0.0228**	**0.0127**
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005
Percloroethylene	<0.0030	<0.0004	**0.0010 B**	**0.0018** [a/]
Trichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004

Detected Compounds Bolded

B = Analyte detected in associated method blank.

Perchloroethyene detected in Trip Blank (0.0014 mg/L and in Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-2(I)

TABLE 7
DOWNERS GROVE OVERBURDEN WELL DG-3(I)
CHLORINATED SOLVENT RESULTS

	mg/L			
Date	11/12/2002	03/25/2003	06/24/2003	10/23/2003
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003
1,1-Dichloroethane	<0.0050	**0.0142**	**0.0184**	**0.0089**
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Chloroethane	**0.0070**	**0.0057**	**0.0111**	**0.0053**
Percloroethylene	<0.0020	<0.0004	<0.0004	**0.0018** a/
Trichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
cis-1,2-Dichloroethylene	<0.0020	<0.0003	**0.0013**	**0.0006**
Vinyl chloride	**0.0020**	**0.0034**	**0.0040**	**0.0033**

Detected Compounds Bolded

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L) and in Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-3(I)

TABLE 8
DOWNERS GROVE OVERBURDEN WELL DG-4(I)
CHLORINATED SOLVENT RESULTS

Date	mg/L 11/12/2002	03/25/2003	06/24/2003	10/23/2003
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003
1,1-Dichloroethane	<0.0050	<0.0002	<0.0002	<0.0002
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005
Percloroethylene	<0.0020	<0.0004	<0.0004	<0.0004
Trichloroethylene	<0.0020	<0.0003	<0.0003	**0.0040** JB
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004

Detected Compounds Bolded

B = Analyte detected in associated method blank.

J= Analyte detected below quantitative limits

R:\Downers Gr San Dist\[DG Tables.xls]DG-4(I)

TABLE 9
DOWNERS GROVE OVERBURDEN WELL LD-1(I)
CHLORINATED SOLVENT RESULTS

	mg/L			
Date	11/12/2002	03/25/2003	06/24/2003	10/23/03
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003
1,1-Dichloroethane	<0.0050	<0.0002	<0.0002	<0.0002
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005
Percloroethylene	<0.0030	<0.0004	**0.0011 B**	<0.0004
Trichloroethylene	<0.0020	<0.0003	<0.0003	**0.0042 JB**
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004

Detected Compounds Bolded
B = Analyte detected in associated method blank.
J= Analyte detected below quantitative limits
Chloroform, chloromethane, methylene chloride
and Perchloroethene detected in trip blank.
Perchloroethene and toluene detected in Field Blank

R:\Downers Gr San Dist\[DG Tables.xls]LD-1(I)

TABLE 10
DOWNERS GROVE OVERBURDEN
FIELD BLANK AND TRIP BLANK RESULTS
CHLORINATED SOLVENT RESULTS
OCTOBER 23, 2003

	mg/L	
Date	Trip Blank	Field Blank
1,1,1-Trichloroethane	<0.0003	<0.0003
1,1-Dichloroethane	<0.0002	<0.0002
1,1,-Dichloroethylene	<0.0003	<0.0003
Chloroethane	<0.0005	<0.0005
Percloroethylene	**0.0014**	**0.0016**
Trichloroethylene	<0.0003	<0.0003
cis-1,2-Dichloroethylene	<0.0003	<0.0003
Vinyl chloride	<0.0004	<0.0004

R:\Downers Gr San Dist\[DG Tables.xls]Sheet1

TABLE 11
DOWNERS GROVE SANITARY DISTRICT
HISTORIC GROUNDWATER ELEVATIONS [a/]

		11/12/02 - 11/14/02		03/27/03		06/23/03		10/23/03		11/21/03	
Well ID	Top of Casing, ft	Depth to GW, ft [b/]	Groundwater Elevation, ft	Depth to GW, ft [b/]	Groundwater Elevation, ft	Depth to GW, ft [b/]	Groundwater Elevation, ft	Depth to GW, ft [b/]	Groundwater Elevation, ft	Depth to GW, ft [b/]	Groundwater Elevation, ft
SB-15(I)	702.04	33.00	669.04	33.53	668.51	33.54	702.04				
DG-15(I)	702.92	48.00	654.92	51.75	651.17	51.27	651.65				
DG-1(I)	688.31	29.30	659.01	26.03	662.28	27.32	660.99	28.18	660.13	27.21	661.10
DG-2(I)	698.62	39.30	659.32	44.67	653.95	43.18	655.44	43.66	654.96	43.22	655.40
DG-3(I)	701.56	42.70	658.86	42.22	659.34	47.82	653.74	49.98	651.58	40.24	661.32
LD-1(I)	708.03	58.50	649.53	59.28	648.75	58.29	649.74	59.63	648.40		
DG-4(I)	703.77	53.45	650.32	53.24	650.53	49.56	654.21	53.56	650.21	50.15	653.62
BD-4(I)	701.65	48.80	652.85	41.43	660.22	42.77	658.88	44.40	657.25		
DG-1(D)	686.94							27.29	659.65	26.21	660.73
DG-5(I)	694.34							45.34	649.00	44.65	649.69
DG-6(I)	697.93							47.23	650.70	46.95	650.98

[a/] Top of casing, well screen interval, and groundwater elevations given relative to mean sea level in feet.
[b/] Depth to groundwater taken from the top of well of the monitoring well casing

R:\Downers Gr San Dist\[gw elev10-23-03xls.xls]groundwater elevations

DG-1 (D)

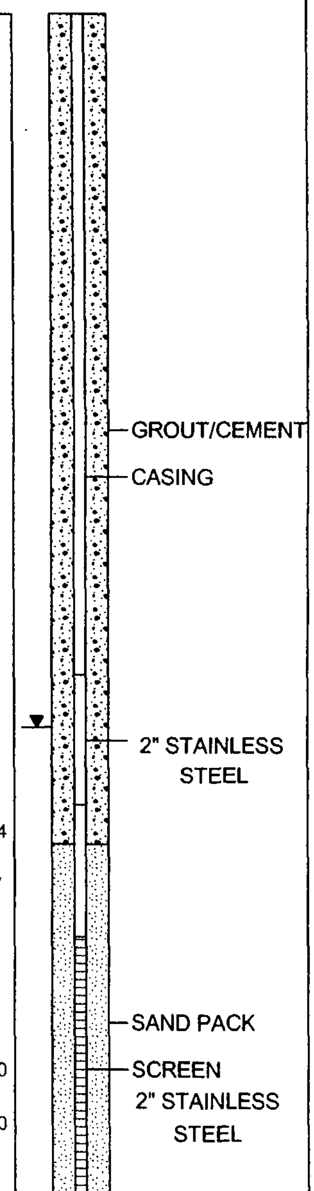
Huff & Huff Incorporated

DOWNERS GROVE SANITARY DISTRICT	
DOWNERS GROVE, IL	
Date Started	: 8/26/03
Date Completed	: 8/26/03
Weather Conditions	: 90 CLOUDY
Drilling Company	: AMERICAN DRILLING
Driller	:
Casing (Size/Material)	: 2" STAINLESS STEEL
Northing Coord.	:
Easting Coord.	:
Elevation	:
Logged By	: TG

SOIL TYPE
- TOPSOIL
- SILTY CLAY
- SILT
- SAND AND GRAVEL
- LIMESTONE

Depth in Feet	SOIL TYPE	DESCRIPTION	PID 11.7eV ppm	Blow Count
0–5	TOPSOIL	NOTE; 0-30' USE SOLID AUGER, LOG CUTTINGS 0-5' TOPSOIL, black, moist,		
5–7	TOPSOIL	5-7' TOPSOIL, black, moist,		
7–10	SILTY CLAY	7-10' SILTY CLAY, brown, wet, soft, plastic		
10–15	SILTY CLAY	10-15' SILTY CLAY, brown thin, gravel, lense at 11', thin sand, gravel lense at 14', wet		
15–30	SILTY CLAY	15-30' SILTY CLAY, brown, with gravel, soft, moist to dry, wet at 27'		
30–32	SAND AND GRAVEL	NOTE: 2' SPLIT SPOON SAMPLER 30-48.5' 30-32', COBBLE, 2" diameter, wet, 12" Recovery		27/18/21/24
32–34	SAND AND GRAVEL	32-34' SAND, GRAVEL, brown, coarse/grained, some clay, wet, 24" Recovery		8/14/20/17
34–35		34-35' NO SAMPLE		
35–41	SAND AND GRAVEL	35-37' SAND, grey-brown, fine to medium grained, loose, wet, 24" Recovery 37-39 as above 24" Recovery 39-41 as above to 40.6, 40.6-41, Brown silt, wet, 24"' Recovery		0/0/5/7 0/5/7/12 12/22/36/40
41–43	SAND AND GRAVEL	41-42' SAND, brown, coarse grained, wet, 42-42.7' SILT, brown, stiff, wet, 42.7-43' SILT, grey, stiff, wet,		20/23/23/50
43–45		43-45' NO RECOVERY, possible silt		
45–47	SILT	45-47 SILT, grey, stiff, wet, 6" Recovery		21/13/16/21
47–48.5	SILT	47-49 SILT, grey, wet, 12" Recovery		6/7/5/50
48.5	LIMESTONE	48.5 REFUSAL, grey, limestone		

Well: DG-1(D)
Elev.:



DG-5(I)

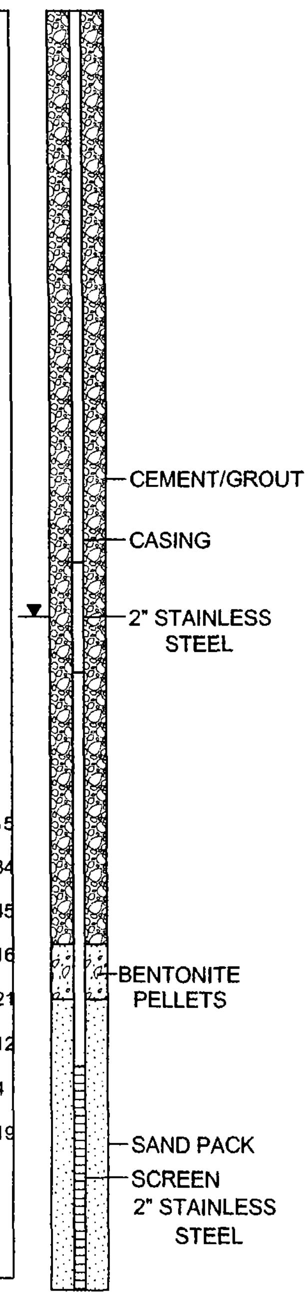
Huff & Huff Incorporated

DOWNERS GROVE SANITARY DISTRICT	Date Started : 8/25/03	Casing (Size/Material) : 2" STAINLESS STEEL	
	Date Completed : 8/25/03	Northing Coord. :	
	Weather Conditions : SUNNY 95	Easting Coord. :	
	Drilling Company : AMERICAN DRILLING	Elevation :	
DOWNERS GROVE, IL	Driller :	Logged By : TG	

SOIL TYPE: LIMESTONE; SAND AND GRAVEL; SILT; SILTY CLAY; CLAY

Well: DG-5(I)
Elev.:

Depth in Feet	DESCRIPTION	PID 11.7eV ppm	Blow Count
0	0-.5' ASPHALT		
	NOTE: 0-20' USE SOLID AUGER, LOG CUTTINGS 0.5-7' CLAY, brown, low plasticity, slightly moist,	<1	
7	7-20' SAND, GRAVEL, brown, traces of gravel up to 2" diameter, some clay, dry,	<1	
		<1	
20	NOTE: 20-30' USE 5' CORE BARREL, NO RECOVERY, LOG CUTTINGS 20-25' SAND, GRAVEL, brown, gravel up to 2" diameter	<1	
25	25-30' SAND, GRAVEL, gravel less than 1/4" in diameter, brown, wet @ 27.5', traces of gravel, 1' Recovery	<1	
30	NOTE: 30-57.5' USE 2' SPLIT SPOON SAMPLERS 30-30.3' SAND, GRAVEL, brown,	<1	
	30.3-31.6 SILT, brown, wet, 20" RECOVERY	<1	50
32	32-34' SILTY CLAY, brown, very dense, traces of gravel, wet, 4" Recovery		
34	34-36' SAND, GRAVEL, brown, wet, gravel up to 1" diameter 6" Recovery	<1	48/50
36	36-38' SAND, GRAVEL, light brown, wet, gravel up to 2" diameter 8" Recovery	<1	35/28/16/15
38	38-40' As Above 14" Recovery	<1	26/31/33/34
40	40-42' As Above 2" Recovery	<1	50/37/35/45
42	42-44' As Above 12" Recovery	<1	35/21/16/16
44	44-44.9' SAND, GRAVEL, light brown, wet, gravel up to 2" diameter 44.9-45.5" SILT, grey, some clay, stiff, traces of gravel, wet, 13" Recovery	<1	28/21/25/21
46	46-48' SILT, grey, stiff, some clay, traces of gravel, wet, 18" Recovery	<1	10/12/12/12
48	48-50' As Above 16" Recovery	<1	8/6/34/34
50	50-52' As Above 16" Recovery	<1	14/14/15/19
52	52-54' SILT, grey, soft, traces of gravel, wet, 17" Recovery	<1	7/7/1/2
54	54-54.9 SILT, grey, soft, traces of gravel, wet, 54.9-56' SAND, grey, loose, coarse grained, wet,	<1	1/4/7/7/
56	56.0-56.6' SAND, grey, loose, coarse grained, wet	<1	7/54/50
56.6	56.6-57.5' LIMESTONE, grey, Refusal at 57.5'		



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DG-6(I)

Huff & Huff, Incorporated

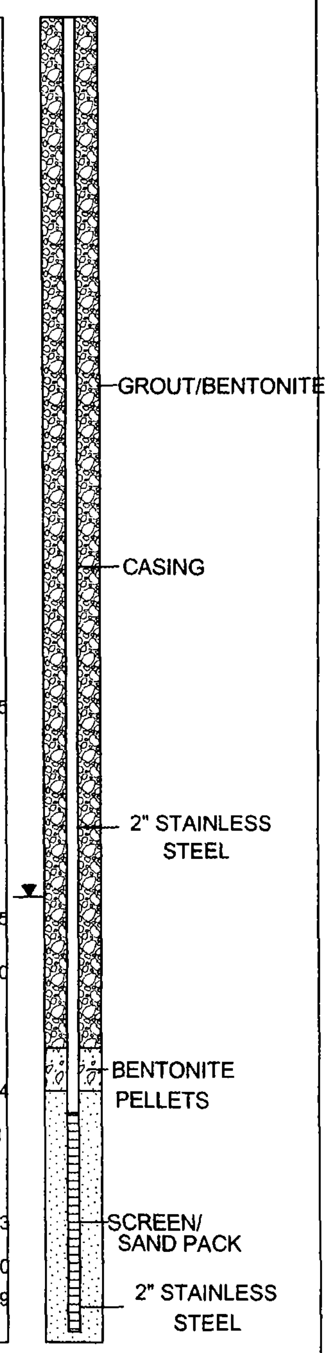
DOWNERS GROVE SANITARY DISTRICT	Date Started : 8/27/03	Casing (Size/Material) : 2" STAINLESS STEEL	
	Date Completed : 8/27/03	Northing Coord. :	
	Weather Conditions : SUNNY 80-90	Easting Coord. :	
	Drilling Company : AMERICAN DRILLING	Elevation :	
DOWNERS GROVE, IL	Driller :	Logged By : TG	

SOIL TYPE

- GRAVEL
- SILTY CLAY
- CLAYEY SILT
- SAND AND GRAVEL

Well: DG-6(I)
Elev.:

Depth in Feet	SOIL TYPE	DESCRIPTION	PID 11.7eV ppm	Blow Count
0	SAND AND GRAVEL	NOTE: 0-20' USE SOLID AUGER , LOG CUTTINGS 0-0.5' Gravel Roadbase, Dry 0.5-10' SAND, GRAVEL, brown, dry,	<1	
5	SAND AND GRAVEL		<1	
10	SAND AND GRAVEL	10-20' SAND, GRAVEL, light brown, dense gravel 11', dry,	<1	
15	SAND AND GRAVEL		<1	
20	SAND AND GRAVEL	NOTE: 20-25' 5' CORE BARREL 20-25' SAND, GRAVEL, brown, 2" gravel diameter, dry, 1' Recovery	<1	
25	SAND AND GRAVEL	NOTE: 25-63' USE 2' SPLIT SPOONS 25-27' SAND, GRAVEL, brown, 2" gravel diameter, dry, 18" Recovery 27-29', As Above, 18" Recovery	<1	
30	SAND AND GRAVEL	29-31' SAND, brown, fine to medium grained, traces of gravel, slightly moist, 18" Recovery	<1	
	SAND AND GRAVEL	31-33' SAND, GRAVEL, brown, dry, 2" diameter grave, 18" Recovery	<1	22/25/36/45
	SILTY CLAY	33-35' SILTY CLAY, brown, dense, 2" diameter gravel, dry, 6" Recovery	<1	
35	GRAVEL	35-37' LIMESTONE GRAVEL, dry, 4" Recovery 37-39 As Above 4" Recovery	<1	37/50
			<1	50
40	SAND AND GRAVEL	39-41' SAND, GRAVEL, fine grained, moist, 12"' Recovery	<1	36/30/50
	SAND AND GRAVEL	41-43' SAND, GRAVEL, grey, gravel, up to 2" diameter, wet at 41', 18" Recovery	<1	30/35/43/45
45	SAND AND GRAVEL	43-45' SAND, GRAVEL, brown, wet, gravel up to 2" diameter, 18" Recovery 45-47 As Above, 18" Recovery	<1	24/36/40/40
			<1	8/40/50
	SAND AND GRAVEL	47-49' SAND, GRAVEL, brown, fine grained, Gravel lense @ bottom 7", wet, 20" Recovery	<1	33/36/50
50	SILTY CLAY / SAND AND GRAVEL	49-49.5' SAND, GRAVEL, brown, wet, 49.5-50.8' SILTY CLAY, grey, dense, traces of gravel, wet,50.8-51' fine grained sand wet, 24" Recovery	<1	13/18/23/24
			<1	8/12/21/21
55	CLAYEY SILT	51-51.8' SILT,grey, stiff, wet, 51.8-53' SAND, brown, very fine grained, wet, 18" Recovery	<1	6/9/10/21
	CLAYEY SILT	53-55' CLAYEY SILT, grey, stiff, wet, 12" Recovery	<1	10/12/14/13
	CLAYEY SILT	55-57' CLAYEY SILT, grey, soft, wet, 17" Recovery	<1	10/11/14/50
60	CLAYEY SILT	57-59' SILT, grey, wet, 17" Recovery 59-61, As Above 24" Recovery	<1	10/12/29/19 50
		61-62' Limestone Bedrock Refusal at 61.5'	<1	



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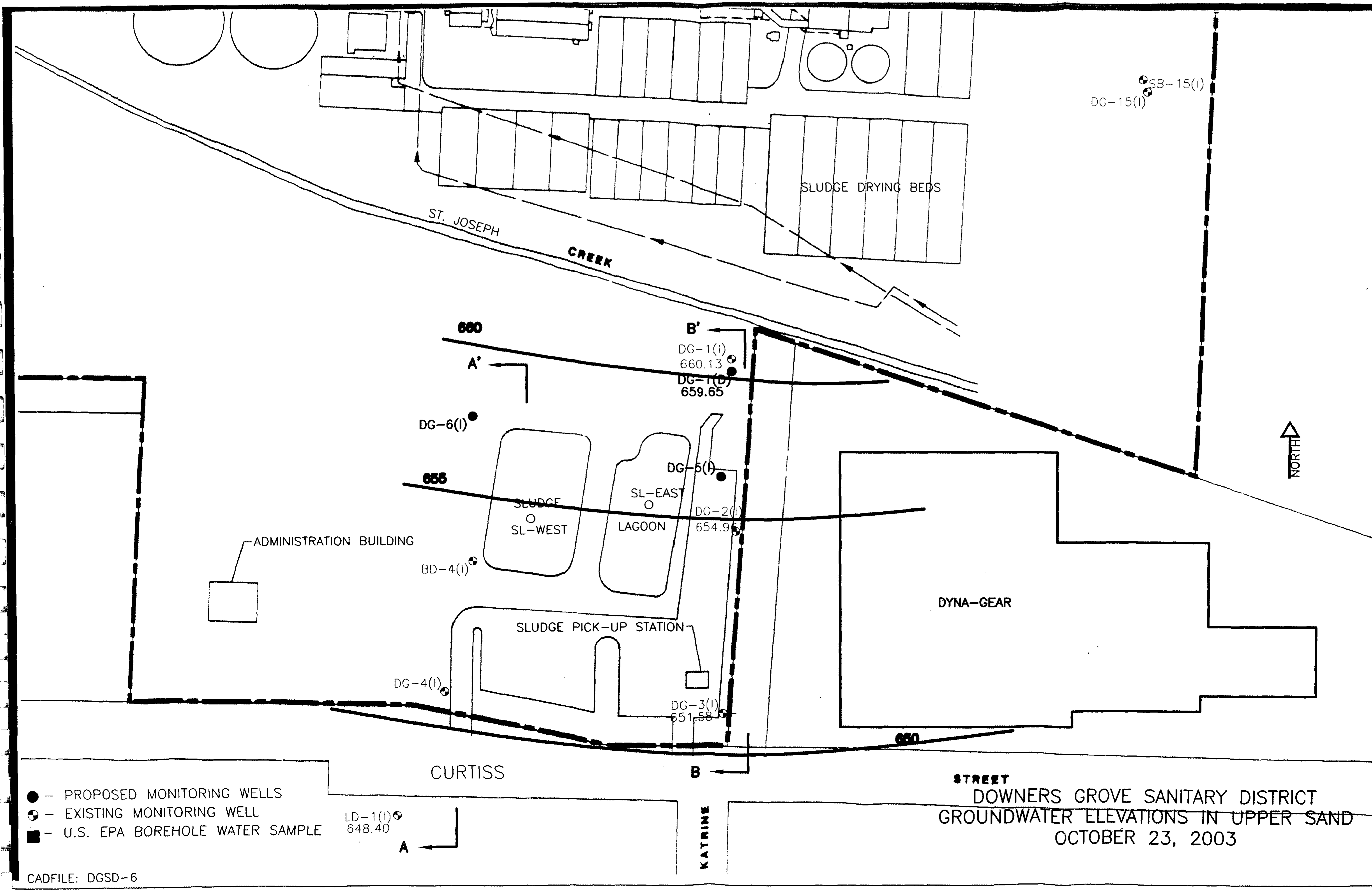
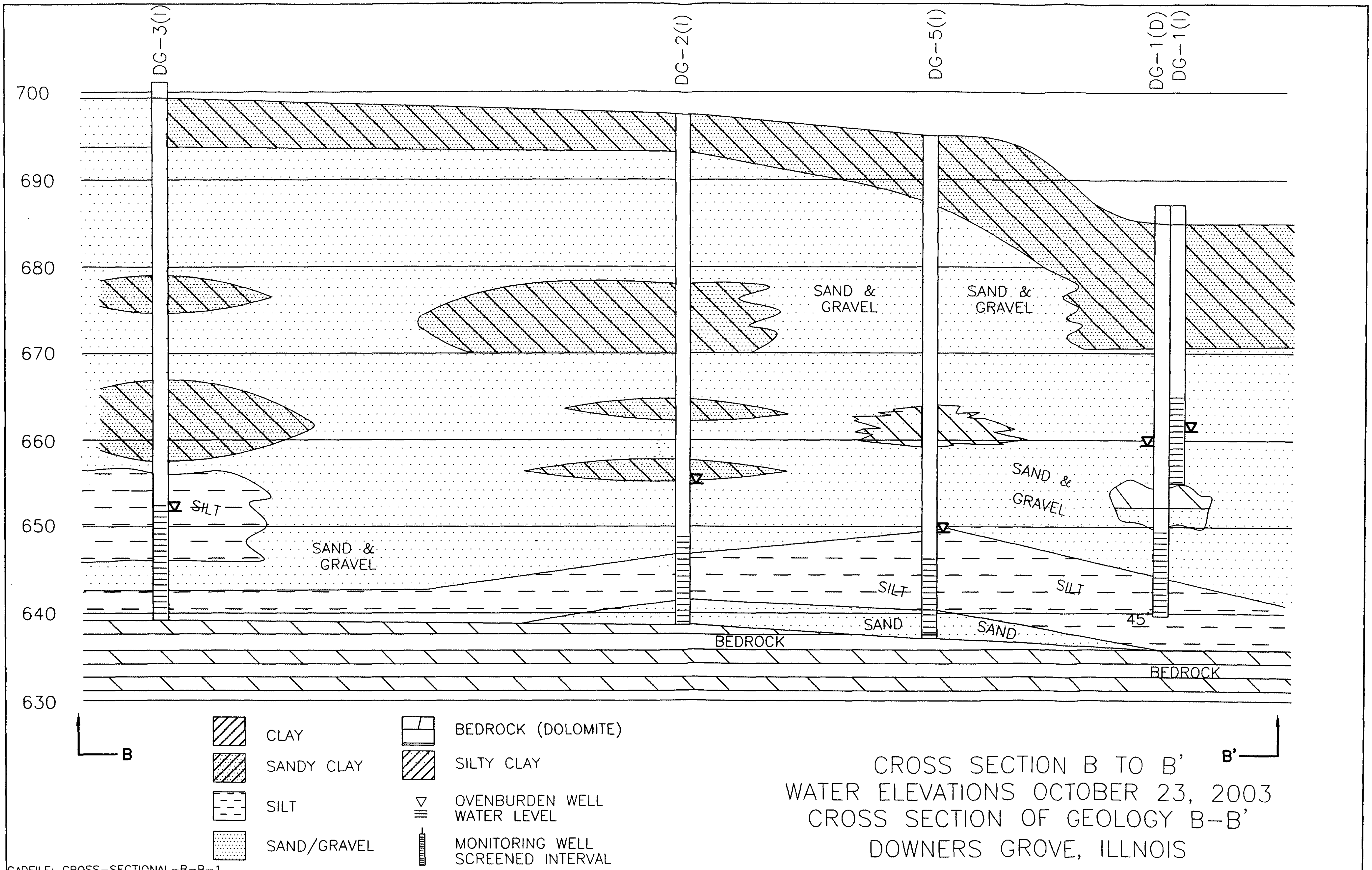
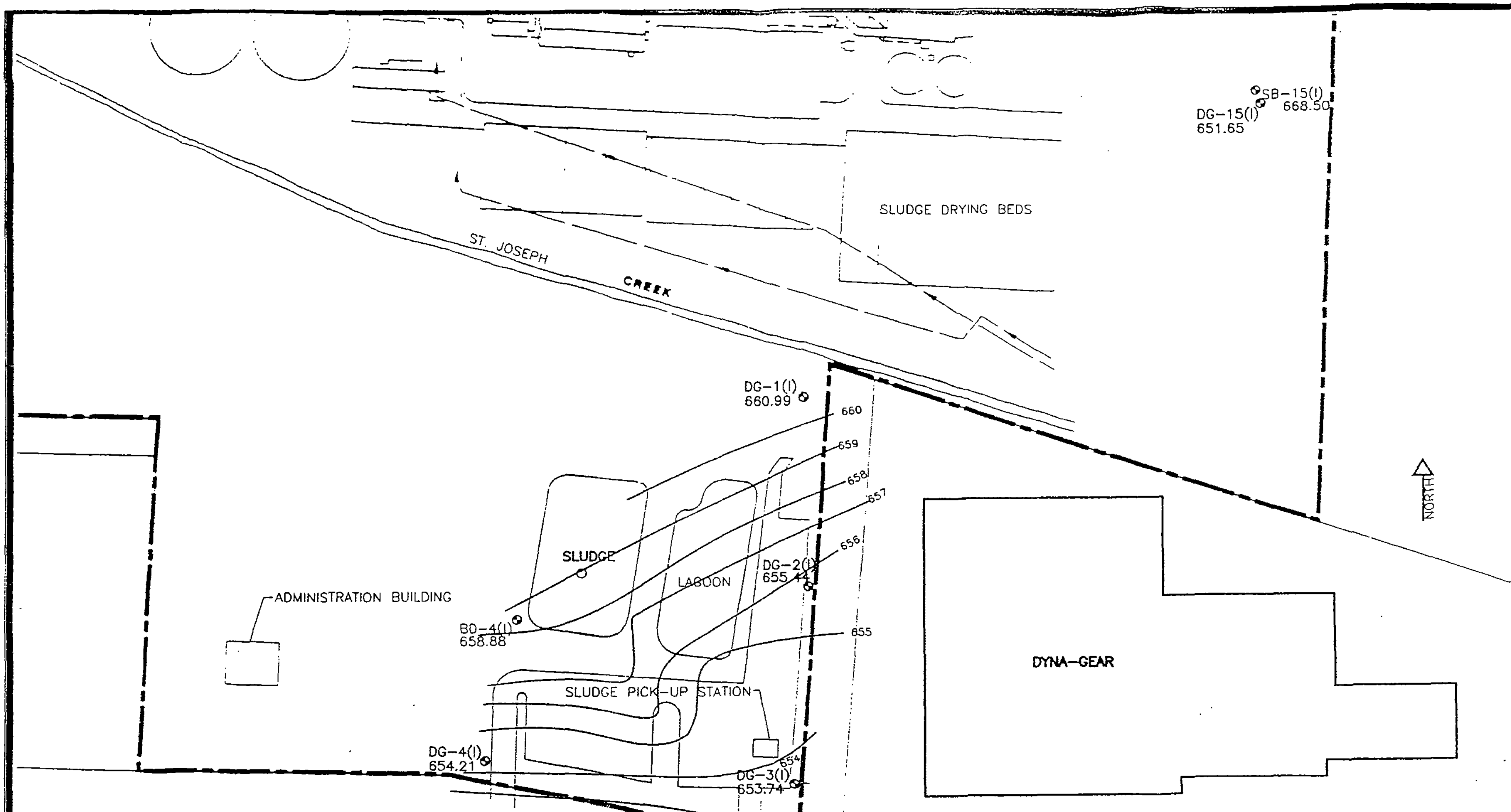


DOWNERS GROVE SANITARY DISTRICT
GROUNDWATER ELEVATIONS IN UPPER SAND
OCTOBER 23, 2003



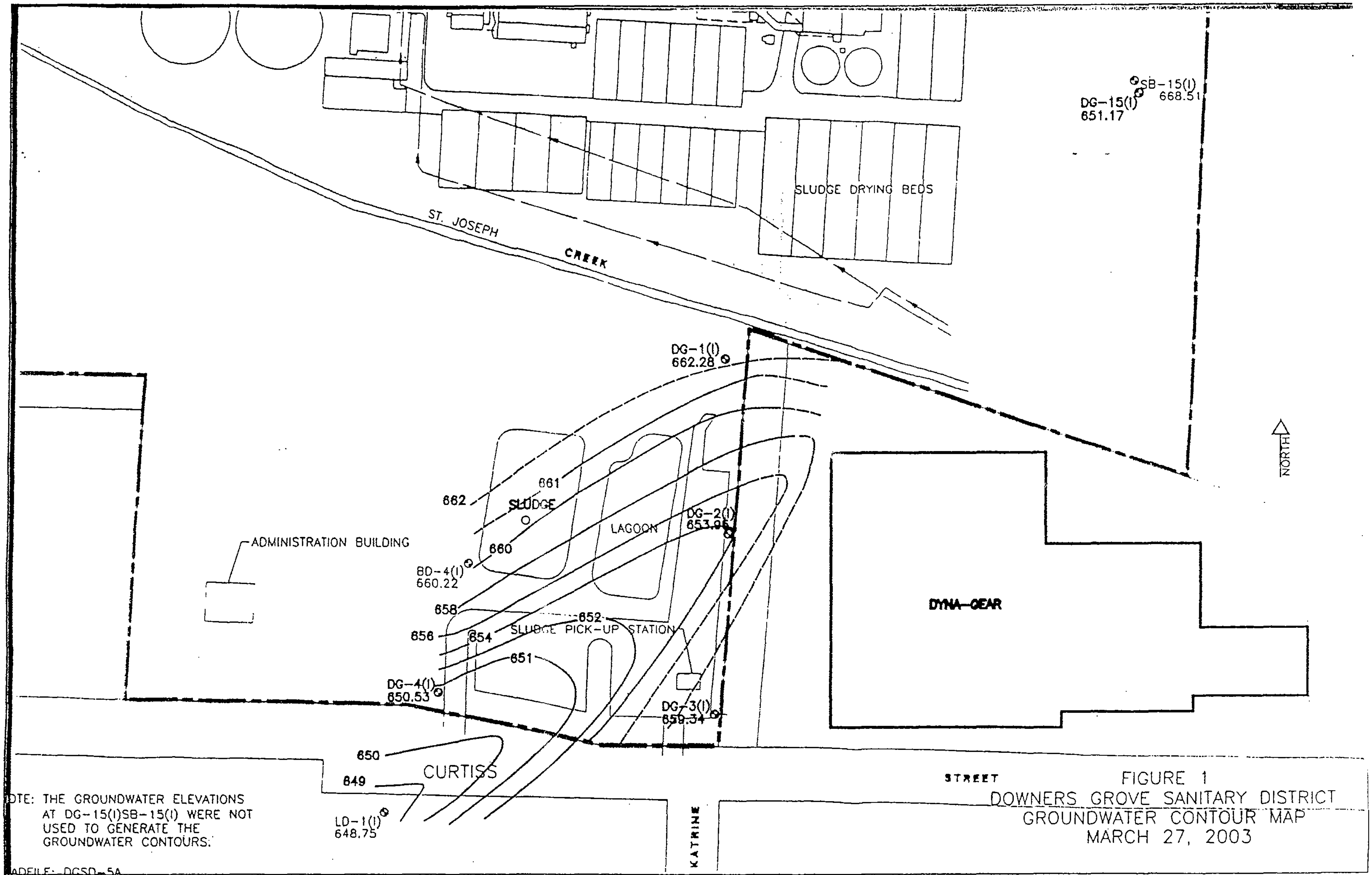
DG-3(I)
DG-2(I)
DG-5(I)
DG-1(D)
DG-1(I)
700
690
680
670
660
650
640
630
SAND & GRAVEL
SAND & GRAVEL
SAND & GRAVEL
SAND & GRAVEL
SILT
SILT
SILT
SAND
SAND
45'
BEDROCK
BEDROCK
B
B'
CLAY
SANDY CLAY
SILT
SAND/GRAVEL
BEDROCK (DOLOMITE)
SILTY CLAY
OVENBURDEN WELL WATER LEVEL
MONITORING WELL SCREENED INTERVAL
CROSS SECTION B TO B'
WATER ELEVATIONS OCTOBER 23, 2003
CROSS SECTION OF GEOLOGY B-B'
DOWNERS GROVE, ILLINOIS
CADFILE: CROSS-SECTIONAL-B-B-1



NOTE: THE GROUNDWATER ELEVATIONS AT DG-15(I) AND SB-15(I) WERE NOT USED TO GENERATE THE GROUNDWATER CONTOURS.

FIGURE 1
DOWNERS GROVE SANITARY DISTRICT
GROUNDWATER CONTOUR MAP
JUNE 23, 2003

CADFILE: DGSD-7



NOTE: THE GROUNDWATER ELEVATIONS AT DG-15(I)SB-15(I) WERE NOT USED TO GENERATE THE GROUNDWATER CONTOURS.

FIGURE 1
DOWNERS GROVE SANITARY DISTRICT
GROUNDWATER CONTOUR MAP
MARCH 27, 2003

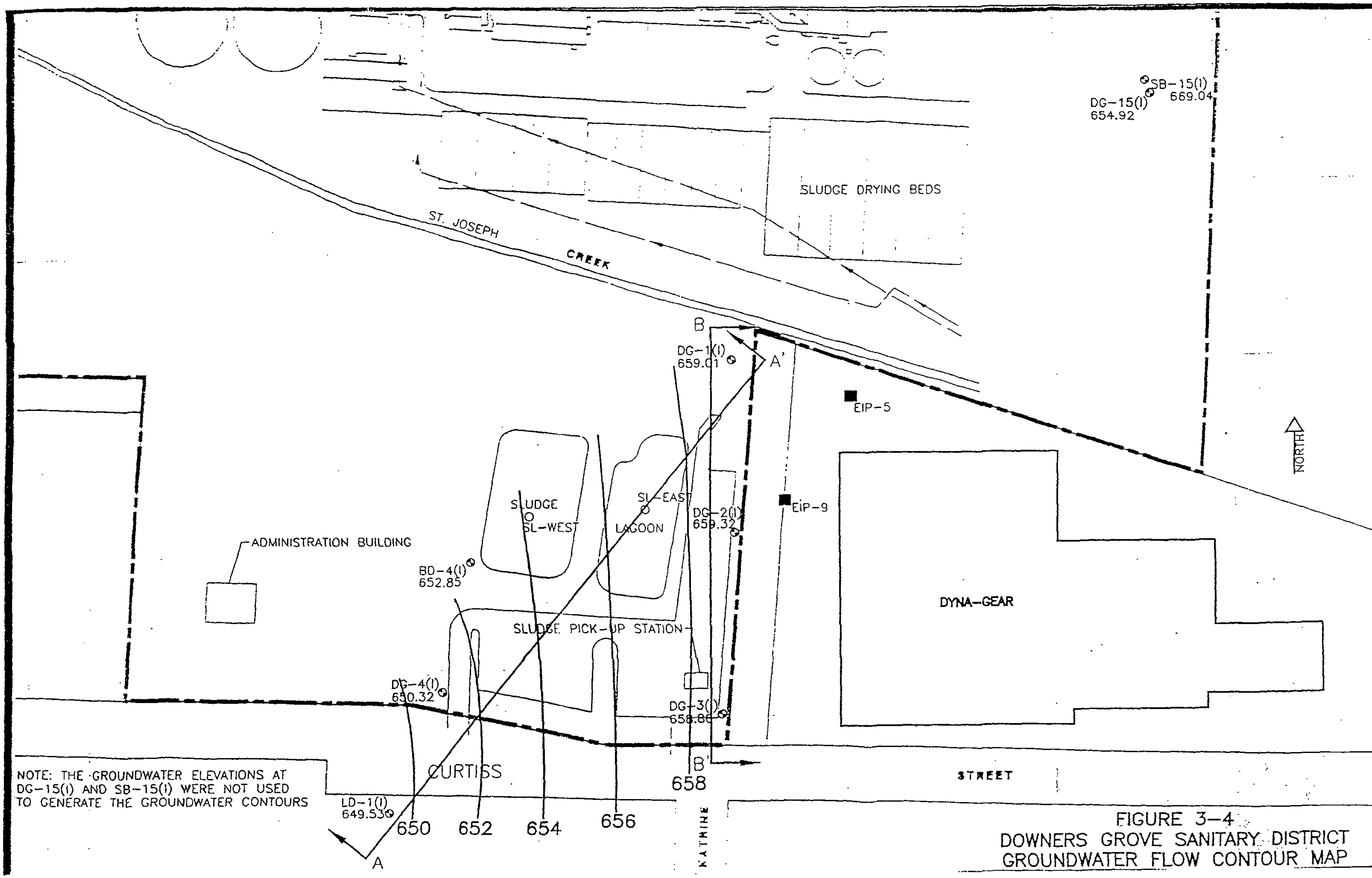


FIGURE 3-4
DOWNERS GROVE SANITARY DISTRICT
GROUNDWATER FLOW CONTOUR MAP

NOVEMBER 12-14, 2002

GROUNDWATER CONTOUR MAP
USEPA AUGUST 2002 REPORT

APPENDIX L

APPENDIX L

U.S. EPA, DATA EVALUATION SUMMARY REPORT, AUGUST 2004
(PARTIAL)

2.3 SOURCE PROPERTY CONCLUSIONS AND RECOMMENDATIONS

Based on the information gathered during this supplemental investigation, it is possible to identify several probable and potential source properties, as well as properties requiring further evaluation. These recommendations are meant to use criteria comparable to those used in the Phase II SA report.

2.3.1 Probable Source Properties

A probable source property is defined as a property where source material may reasonably be expected to be present based on analytical data and background information. In general, these include properties where target chlorinated-solvent constituents exceed screening criteria in both soil and groundwater at concentrations comparable to previously identified probable source areas, and for which available background information indicates the potential for chlorinated-solvent use. Based on the data collected during the supplemental investigation, the following property is identified as a probable target chlorinated compound source:

- **2655 Wisconsin:** During the suplimental investigation, TCE was detected in shallow soil at the 2655 Wisconsin property at concentrations ranging from 9,500 to 35,000 ug/kg. TCE was also detected in shallow groundwater at levels of 5.6 to 31 ug/L. These concentrations in soil and groundwater are comparable to reference levels of those properties listed as probable sources during the previous Phase II SA. According to available background information, the 2655 Wisconsin property has previously had unspecified hazardous materials used in four "black oxide" tanks at the property. Waste streams sampled during 1992 indicate the presence of PCE in one sample at a concentration of 21 ug/L. Based on background information and concentrations of TCE in soil and groundwtaer at this property, it is concluded that probable TCE source materials are present on the 2655 Wisconsin property. Additional work will be required to identify the specific source location, extent, and magnitude of target chlorinated compounds.

2.3.2 Potential Source Properties

A potential source property is defined as a property where there is a possibility that source materials are present based on analytical data and background information. These include properties where reference criteria (soil or groundwater) have been exceeded, but not necessarily at concentrations indicating a definitive source (although one may be nearby), or where complicating factors such as groundwater flow direction or surface drainage patterns increase uncertainty. These facilities will require additional investigation to determine the source, nature, and extent of chlorinated-solvent constituents. Based on data collected during this supplemental investigation, the following properties are identified as potential sources:

- **5000 - 5014 Chase:** PCE was detected in the shallow soil along the north side of the building at a concentration of 240 ug/kg. TCE and several common degradation products, as well as carbon tetrachloride, were also detected in soil samples at concentrations below reference levels. PCE was detected in the shallow groundwater on the north side of the building at concentrations ranging from 17 to 340 ug/L. Additionally, the following target chlorinated compounds exceeded their reference levels in shallow groundwater along the north side of the building: TCE (210 ug/L); 1,1,1-TCA (230 ug/L); 1,1,2-trichloroethane (9.9 ug/L); 1,1-dichloroethene (8.9 ug/L); carbon tetrachloride (18 ug/L); and cis-1,2-dichloroethene (200 ug/L). A subsurface soil investigation report from a previous investigation of the 5000 - 5014 Chase property conducted by Earth Tech, Inc. dated January 2003 indicates that target chlorinated compounds were detected in the shallow soil and groundwater at the site. Additional work will be required to identify the specific source location, extent, and magnitude of target chlorinated compounds at this property.

- **2424 Wisconsin:** During the supplemental investigation, the following target chlorinated compounds exceeded their respective reference levels in shallow soil: 1,1,1-TCA (4,700 ug/Kg); 1,1-dichloroethane (110 to120 ug/kg); 1,1-dichloroethene (83 ug/kg); and carbon tetrachloride (84 ug/kg). The following target chlorinated compounds exceeded their respective reference levels in shallow groundwater: TCE (19 ug/L); 1,1,1-TCA (360 to 1,200 ug/L); and carbon tetrachloride (8.5 ug/L). Background information indicates the company that previously occupied the property used solvents to clean gears and for a cutting process in a closed loop system. An IEPA inspection in 1991 noted stained soil at the property adjacent to a drum storage area. Contaminated soil was removed in May 1991. Additional work will be required to identify the specific source location, extent, and magnitude of target chlorinated compounds at this property.

- **2500 Curtiss:** During supplemental investigation activities, TCE was detected above reference levels at the eastern end of the property at an estimated concentration of 130 ug/L within a shallow groundwater zone. The sampling location is adjacent to a detention basin. An estimated TCE concentration of 4 ug/kg was detected in a shallow soil sample on the west side of the building. The company has indicated that it purchased no chlorinated solvent/cleaner chemicals. The property is located between properties to the east and west which were identified during the Phase II SA as potential source facilities due to detected chlorinated-solvent contamination in soil and groundwater. Additional work will be required to identify the specific source location, extent, and magnitude of target chlorinated compounds at this property, and evaluate the relationship to adjacent properties.

2.3.3 Properties Requiring Further Evaluation

In addition to the probable and potential source properties identified above, a number of properties have been identified within the industrial park for which analytical data indicates the presence of target chlorinated compounds at the property, but at generally low and/or estimated concentrations below screening criteria for soil and groundwater. These properties may also have a history of chlorinated compound use, documentation of past releases, and/or are proximal to previously identified probable or potential sources. These include the following properties:

- **5240 Belmont:** During the supplemental investigation, the following target chlorinated compounds were detected in soil samples: 1,1,1-TCA; and 1,1-dichloroethane. The following target chlorinated compounds were detected in groundwater samples: TCE; 1,1,1-TCA; 1,1-dichloroethane; and cis-1,2-dichloroethene. The compounds present were detected at low and/or estimated values. The property is adjacent to the 2301 Curtiss Street property, previously identified during the Phase II SA as a potential source facility due to the presence of PCE and TCE. Due to the presence of target chlorinated compounds and proximity to a potential source property, further evaluation of the property is warranted to evaluate the source and extent of detected target chlorinated-compounds.

4.10 2500 CURTISS

4.10.1 Geology and Groundwater Occurrence

The geology of the 2500 Curtiss property consists primarily of three lithologies throughout the site. The property is generally layered with a sandy/silty clay overlying a thickly bedded sand and gravel which is underlain by a sandy/silty clay. The upper sandy/silty clay is primarily of highly plastic, soft clay with trace gravel. The thickly bedded sand and gravel strata are generally loose, dry to slightly moist, and well graded. The lower sandy/silty clay is primarily a stiff, dry basal till containing consistent trace gravel.

Groundwater was encountered in two soil borings at the 2500 Curtiss property within sand and gravel deposits generally between 20 and 30 feet bgs.

4.10.2 Analytical Results

4.10.2.1 Soil

Twenty-one soil samples were collected from soil borings at the 2500 Curtiss property during this investigation. Results of the VOC soil sample analysis are presented in Table 4-10A. The following VOCs were detected in soil samples:

- TCE
- 2-Butanone
- Acetone
- Methylene Chloride

The above-listed compounds were detected at low and/or estimated concentrations. One target chlorinated solvent compound (TCE) was detected in soil samples at the 2500 Curtiss property. The target compound was present at concentrations less than its reference level.

4.10.2.2 Groundwater

Groundwater was encountered in two of the soil borings completed at the 2500 Curtiss property. Groundwater samples were collected from boring locations EIP-GP60 and EIP-GP207. Results of the VOC groundwater sample analysis are presented in Table 4-10B. The following VOCs were detected in groundwater samples:

- PCE
- TCE
- Benzene
- Carbon Disulfide
- Cis-1,2-Dichloroethene
- Methylbenzene
- Methylcyclohexane
- Trans-1,2-Dichloroethene

The above-listed compounds were detected at low and/or estimated concentrations, with the following exceptions. Four target chlorinated solvent compounds (PCE, TCE, cis-1,2-dichlorethene, and trans-1,2-dichloroethene) were detected in groundwater samples at the 2500 Curtiss Chase property. TCE exceeded its reference level (5 ug/L) at an estimated concentration of 130 ug/L in soil boring EIP-GP60.

The TCE concentration detected in GPW-60 was flagged as an estimated value "J" during data validation. The sample was diluted and re-run due to TCE exceeding the instrument calibration range. A laboratory method blank was analyzed in conjunction with this sample. TCE was not reported in the method blank. At some point after the investigative samples were run, and after the laboratory method blank was run, a laboratory storage blank was analyzed. This storage blank was located in the cooler with the samples prior to the samples being analyzed. When the laboratory storage blank was analyzed, TCE was detected. Therefore, the U.S. EPA ESAT contractors that review the data in compliance with the U.S. EPA National Functional Guidelines for Low Concentration Data Review flagged the sample result with a "J", indicating the value is to be considered usable, but estimated. In addition, there was a field blank and a trip blank associated with this sample. Neither the field blank or the trip blank contained TCE.

4.11 PROPERTY SOUTH OF INTERSECTION OF CURTISS AND GLENVIEW AND EAST OF BELMONT

4.11.1 Geology and Groundwater Occurrence

The geology of the property south of the intersection of Curtiss and Glenview and East of Belmont consists primarily of silty/sandy clays overlying laterally discontinuous lenses of interstratified silts, sands, and gravels. The silty/sandy clays generally contain trace to moderate amounts of coarse sediments with moderate firmness and plasticity. The silts, sands, and gravels vary in appearance and thickness throughout the property south of the intersection of Curtiss and Glenview and East of Belmont and are laterally discontinuous from one boring location to another.

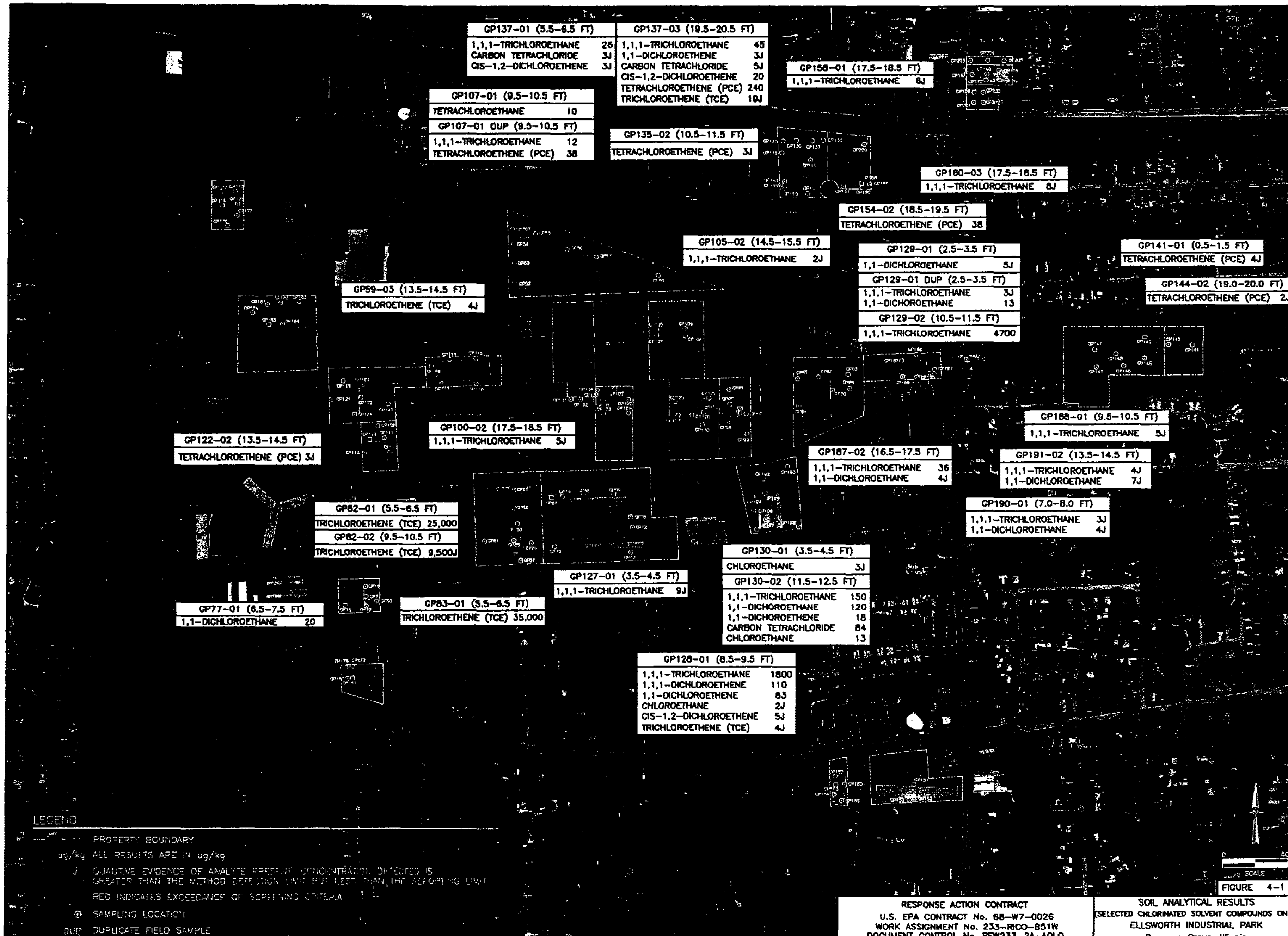
Groundwater was encountered in seven soil borings at the property south of the intersection of Curtiss and Glenview and East of Belmont in primarily coarse grained lithologies varying in boring depth of 7 to 30 feet bgs.

4.11.2 Analytical Results

4.11.2.1 Soil

Nineteen soil samples were collected from soil borings at the property south of the intersection of Curtiss and Glenview and East of Belmont during this investigation. Results of the VOC soil sample analysis are presented in Table 4-11A. The following VOCs were detected in soil samples:

- PCE
- Acetone
- Chloroform
- Methylene Chloride



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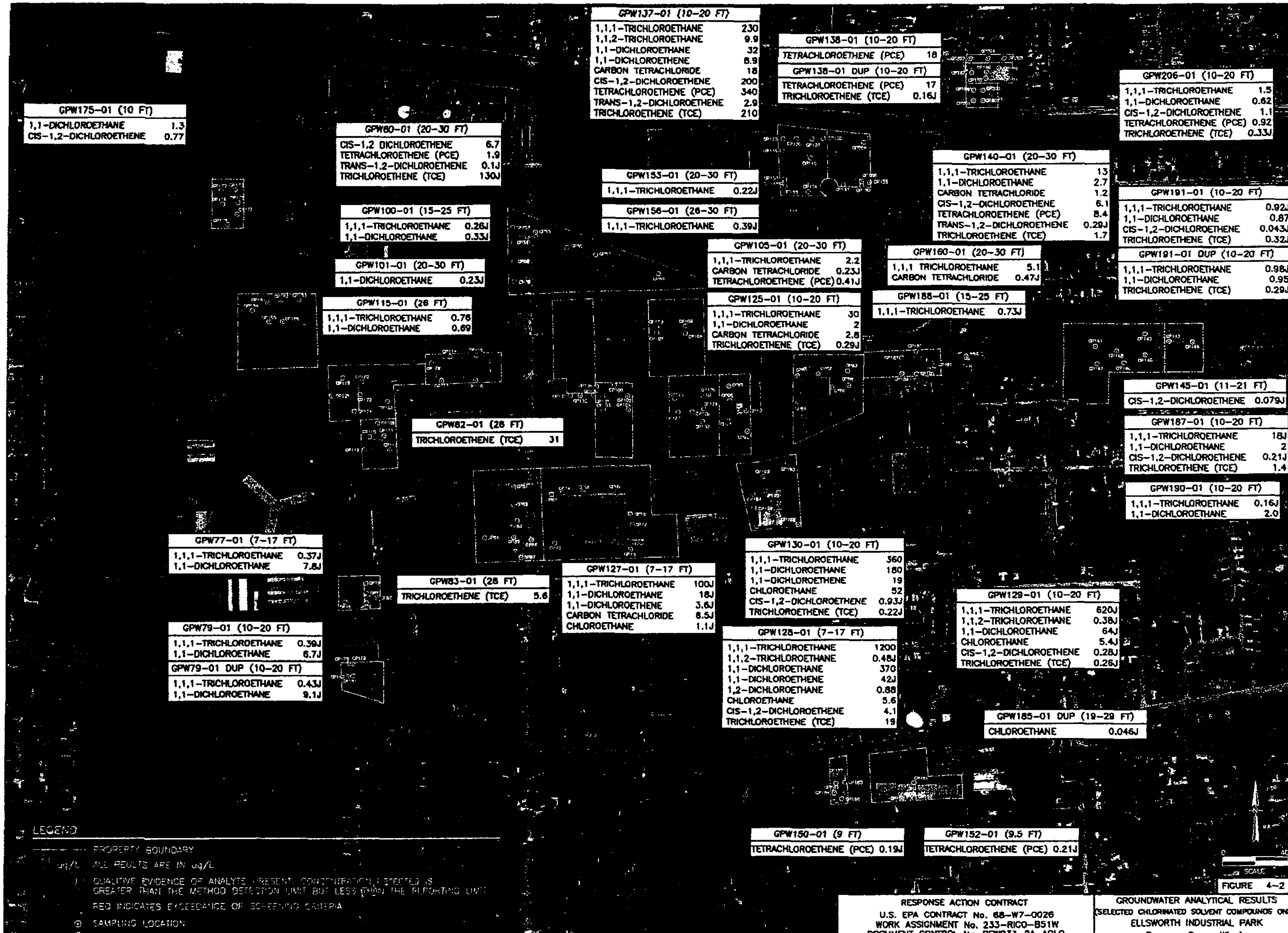

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Table 4-10A

2500 Curtiss
Soil Sampling Results (VOCs)
Downers Grove, Illinois

Field Sample ID	Screening Criteria [a]	GP207-01	GP207-02	GP207-03	GP54-01	GP54-02	GP54-03	GP55-01	GP55-02	GP56-01	GP58-01DUP	GP58-02	GP58-03	GP59-01	GP59-03	GP60-01	GP60-02	GP60-03
Sample Date		1/26/2004	1/26/2004	1/26/2004	1/26/2004	1/26/2004	1/26/2004	1/27/2004	1/27/2004	1/27/2004	1/26/2004	1/26/2004	1/26/2004	1/26/2004	1/26/2004	1/27/2004	1/27/2004	1/27/2004
Depth Interval		2.5- 3.5	8.5- 9.5	16.5- 17.5	3.5- 4.5	12.5- 13.5	25.5- 26.5	14.5- 15.5	24.5- 25.5	3.5- 4.5	1.5- 2.5	6.5- 7.5	16.5- 17.5	1.5- 2.5	13.5- 14.5	3.5- 4.5	9.5- 10.5	15.5- 16.5
Chemical Name																		
2-BUTANONE	—										3 J			8 J			5 J	
ACETONE	16,000	9 J					12 J		4 J	11 J	17 J		2 J	28 J		7 J	17 J	9 J
METHYLENE CHLORIDE	20		2 J	3 J	3 J	2 J	2 J	2 J			2 J	3 J	2 J	2 J	3 J			
TRICHLOROETHENE	60														4 J			

J = Qualitative evidence of analyte present: concentration detected is greater than the method detection limit but less than the reporting limit.
[a] = Value based on industrial/commercial property soil remediation objective contained in 35 IAC 742, Appendix B, Table B. Value indicated is lowest of ingestion, inhalation and migration to Class I Groundwater.
Soil values are expressed in micrograms per kilogram (ug/kg), or parts per billion (ppb).
Bold values = detection
= Exceeds Screening Criteria
— Not Established

Table 4-10B

2500 Curtiss
Groundwater Sampling Results (VOCs)
Downers Grove, Illinois

Field Sample ID	Screening Criteria [b]	GPW207-01	GPW60-01
Sample Date		1/27/2004	1/27/2004
Depth Interval		20- 30	20- 30
Chemical Name			
BENZENE	5	0.17 J	0.32 J
CARBON DISULFIDE	700	0.37 J	0.18 J
CIS-1,2-DICHLOROETHENE	70		6.7
TOLUENE	1,000	0.41 J	0.55
METHYLCYCLOHEXANE	—	0.12 J	
TETRACHLOROETHENE	5		1.9
TRANS-1,2-DICHLOROETHENE	100		0.1 J
TRICHLOROETHENE	5		130 J

J = Qualitative evidence of analyte present: concentration detected is greater than the method detection limit but less than the reporting limit.
[b] = TACO Tier 1 groundwater remediation objectives for groundwater component of the class I groundwater ingestion route established in 35 IAC 742, Appendix B, Table E.
Groundwater values are expressed in micrograms per liter (ug/L), or parts per billion (ppb).
Bold values = detection
= Exceeds Screening Criteria
— Not Established

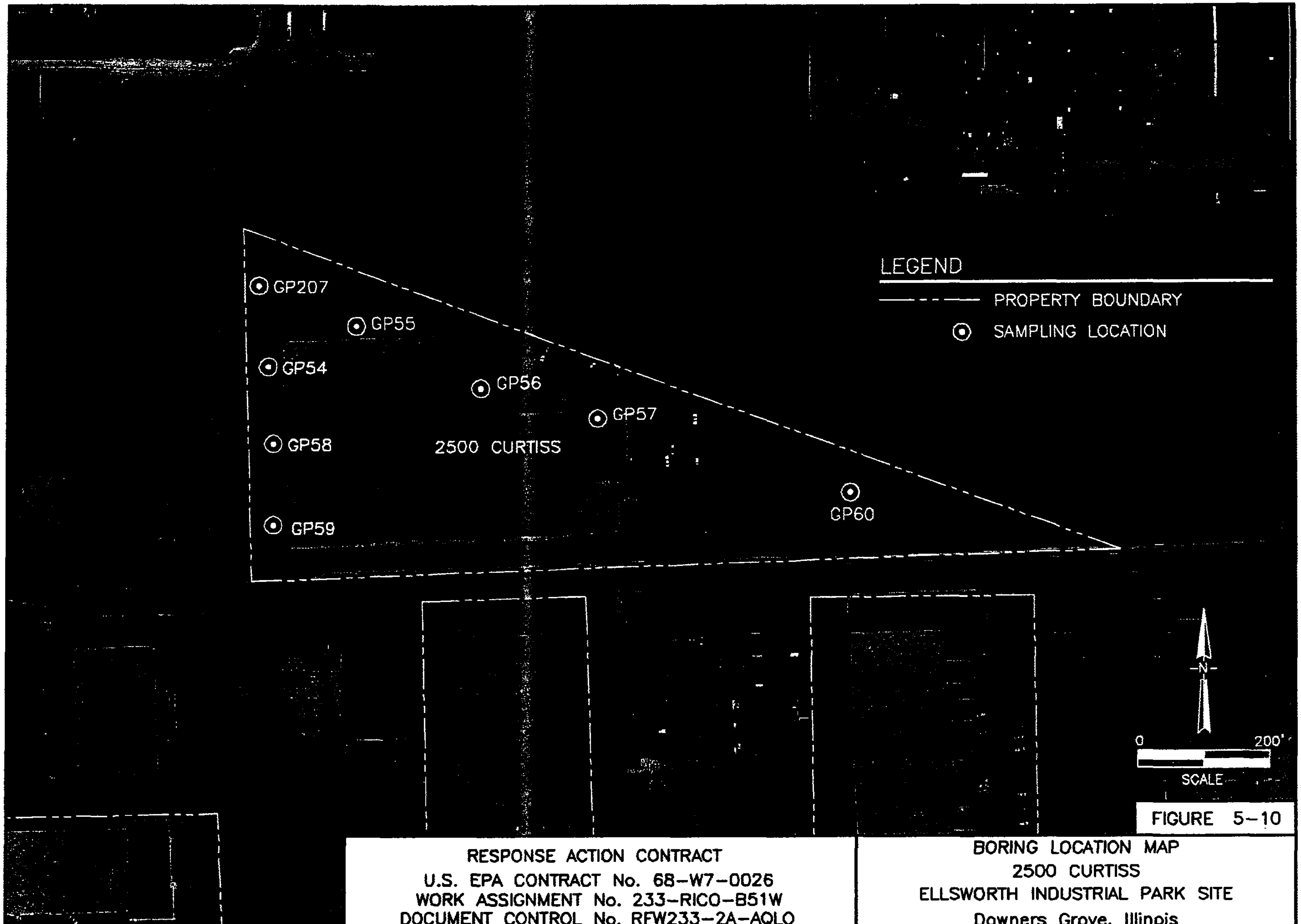

FIGURE 5-10

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
WORK ASSIGNMENT No. 233-RICO-B51W
DOCUMENT CONTROL No. RFW233-2A-AQLO

BORING LOCATION MAP
2500 CURTISS
ELLSWORTH INDUSTRIAL PARK SITE
Downers Grove, Illinois

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TABLE 4-30
Logging and Sampling Summary
Ellsworth Industrial Site
Downers Grove, Illinois

Property	Soil Boring Location	MIP Completed	Soil Sampled	Soil Sample Interval	Soil QA/QC	GW Sampled	GW Sample Depth	GW QA/QC
2824 Hitchcock	GP-172	4/13/04	4/14/04	(3.5-4.5), (10.5-11.5)	NA	4/15/04	10'	NA
	GP-173	4/13/04	4/14/04	(3.5-4.5), (8.5-9.5), (20.5-21.5)	DUP	4/15/04	10'	NA
	GP-174	4/13/04	4/13/04	(8.5-9.5), (14.5-15.5)	MS/MSD	NA	NA	NA
	GP-175	4/13/04	4/14/04	(3.5-4.5), (18.5-19.5)	NA	4/15/04	10'	NA
	GP-176	4/13/04	4/13/04	(1.5-2.5), (13.5-14.5)	NA	NA	NA	NA
	GP-177	4/13/04	4/13/04	(4.5-5.5), (11.5-12.5), (15.5-16.5)	NA	4/14/04	5'	DUP
5126 Walnut	GP-161	4/29/04	4/29/04	(6.5-7.5), (19.5-20.5)	DUP	4/29/04	10'-20'	DUP
	GP-162	4/29/04	4/29/04	(6.5-7.5), (13.5-14.5)	NA	NA	NA	NA
	GP-163	4/29/04	4/29/04	(4.5-5.5), (10.5-11.5)	NA	NA	NA	NA
	GP-164	4/29/04	4/29/04	(2.5-3.5), (13.5-14.5)	NA	4/29/04	15'-25'	NA
	GP-165	4/29/04	4/29/04	(3.5-4.5), (9.5-10.5)	NA	4/29/04	5'-15'	NA
	GP-166	4/29/04	4/29/04	(8.5-9.5), (19.5-20.5)	NA	NA	NA	NA
5225 Walnut	GP-119	12/15/03	12/16/03	(3-4), (15.5-16.5)	NA	NA	NA	NA
	GP-120	12/18/03	12/18/03	(4.5-5.5), (17.5-18.5)	NA	NA	NA	NA
	GP-121	12/19/03	12/22/03	(9.5-10.5), (19.5-20.5)	DUP/MSD	NA	NA	NA
	GP-122	12/18/03	12/18/03	(7.5-8.5), (13.5-14.5)	NA	NA	NA	NA
	GP-123	12/16/03	12/18/03	(3.5-4.5), (11.5-12.5)	NA	NA	NA	NA
	GP-124	12/15/03	12/16/03	(1.5-2.5), (6.5-7.5), (12.5-13.5)	NA	NA	NA	NA
5224 Katrine	GP-114	12/15/03	12/15/03	(9.5-10.5), (17.5-18.5), (30.5-31.5)	DUP	NA	NA	NA
	GP-115	12/15/03	12/15/03	(5.5-6.5), (17.5-18.5)	NA	12/15/03	(26)	NA
	GP-116	12/15/03	12/15/03	(7.5-8.5), (17.5-18.5)	NA	NA	NA	NA
	GP-117	12/17/03	12/18/03	(1.5-2.5), (15.5-16.5)	NA	NA	NA	NA
	GP-118	12/17/03	12/17/03	(3.5-4.5), (11.5-12.5)	NA	NA	NA	NA
Wooded Area South of 2537 Curtiss	GP-131	12/1/03	12/1/03	(7.5-8.5), (21.5-22.5)	NA	NA	NA	NA
	GP-132	12/1/03	12/1/03	(13.5-14.5),(24.0-25.0)	MS/MSD	NA	NA	NA
	GP-133	12/1/03	12/2/03	(1.5-2.5), (16.5-17.5)	NA	12/2/03	(16)	MS/MSD
	GP-134	4/6/04	4/6/04	(1.5-2.5), (17.5-18.5)	NA	4/7/04	16'-26'	NA
2500 Curtiss	GP-54	1/16/04	1/26/04	(3.5-4.5),(12.5-13.5),(25.5-26.5)	NA	NA	NA	NA
	GP-55	1/15/04	1/27/04	(14.5-15.5),(24.5-25.5)	DUP, MS/MSD	NA	NA	NA
	GP-56	1/16/04	1/27/04	(3.5-4.5),(25.5-26.5)	NA	NA	NA	NA
	GP-57	1/16/04	1/27/04	(4.5-5.5),(15.5-16.5)	NA	NA	NA	NA
	GP-58	1/16/04	1/26/04	(1.5-2.5),(6.5-7.5),(16.5-17.5)	DUP	NA	NA	NA
	GP-59	1/16/04	1/26/04	(1.5-2.5),(5.5-6.5),(13.5-14.5)	NA	NA	NA	NA
	GP-60	1/15/04	1/27/04	(3.5-4.5),(9.5-10.5),(15.5-16.5)	NA	1/27/04	(20.0-30.0)	NA
	GP-207	1/16/04	1/26/04	(2.5-3.5),(8.5-9.5),(16.5-17.5)	NA	1/27/04	(20.0-30.0)	NA
2732 Wisconsin	GP-109	12/8/03	12/17/03	(1.5-2.5), (9.5-10.5)	(DUP)	NA	NA	NA
	GP-110	12/8/03	1/16/04	(1.5-2.5), (19.5-20.5)	MS/MSD	NA	NA	NA
	GP-111	12/8/03	12/17/03	(10.5-11.5), (23.5-24.5)	NA	NA	NA	NA
	GP-112	12/8/03	1/16/04	(2.5-3.5), (9.5-10.5)	DUP	NA	NA	NA
	GP-113	12/8/03	12/17/03	(1.5-2.5), (17.5-18.5), (21.5-22.5)	NA	NA	NA	NA

Table 5-1

Sampling Locations and Rationale
Ellsworth Industrial Park Site
Downers Grove, Illinois

Site	Boring ID	Description/ Rationale of Location
2500 Curtiss	GP54	West side of building, evaluate groundwater constituents detected in previous studies on west side of building adjacent to west property line.
	GP55	North side of building
	GP56	Northeast portion of building, loading dock area, storage area
	GP57	Northeast corner of building, loading docks, container storage area, possible staining noted 1995 aerial photography.
	GP58	West side of building, evaluate groundwater constituents detected in previous studies on west side of building adjacent to west property line.
	GP59	West side of building, evaluate groundwater constituents detected in previous studies on west side of building adjacent to west property line.
	GP60	East side of property, adjacent to retention basin shown in multiple aerial photographs
	GP207	Northwest corner of property, evaluate previous VOC detections
2300 Wisconsin	GP61	Northwest corner of building, outside storage area and drainage ditch noted in 1967 and 1975 aerial photography
	GP62	North side of building, possible stacked storage area noted 1990 aerial photography.
	GP63	Wooded outlot northeast portion of property in area of noted drainage ditch 1967and 1975 aerial photography
	GP64	West side of building.
	GP65	East side of building, area where drainage ditches originate 1967 and 1975 aerial photography
	GP66	Wooded outlot northeast portion of property in area of noted drainage ditch 1967 and 1975 aerial photography
2525 Wisconsin	GP67	North side of building, loading dock area
	GP68	North side of building
	GP69	North side of building
	GP70	South side of building, manmade drainage channel noted along south side of building in 1978 aerial photo
	GP71	South side of building, ditch noted in area in 1967 aerial photo just to east, manmade drainage channel noted in 1978 aerial photo
	GP72	East side of building, refuse container storage area noted 1972 aerial photo, former vapor degreaser inside building
	GP73	South side of building, ditch noted in area in 1967 aerial photo
	GP74	North side of building, loading dock area
	GP75	East side of building, refuse container storage area noted 1972 aerial photo, former vapor degreaser inside building

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP54

Date Completed : 26 January 2004
Drilling Company : IPS
Drilling Method : Geoprobe
Driller Name : Ryan Scott
Borehole Diameter : 2"

Total Depth : 30' BGS
WESTON Geologist : Ted Cagney
Location : 2500 Curtiss

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Depth in feet	Recovery (in)	USCS	DESCRIPTION	PID (ppm)	REMARKS
2–3	36/48	FL	FILL; Sandy clay, grey, trace gravel, slightly moist, stiff.		
3–5.5		CL	SANDY CLAY; Brown, soft, trace gravel, dry to slightly moist.	0.0	Soil sample collected at 14:55 for VOCs and percent moisture content - sample ID EIP-GP54-01.
5.5–6		CL	SILTY CLAY; Dark brown, soft, moist, trace gravel, very friable along layers.		
11–15	36/48	SW	SAND with gravel; Orange, coarse gravel, loose, dry, no petroleum odor or staining.	0.0	Soil sample collected at 15:10 for VOCs and percent moisture content - sample ID EIP-GP54-02.
22					Piezometer well screen set from 20 to 30 feet.
24–28	21/48	CL	SANDY CLAY; Brown and grey, moist, trace gravel, soft, but becomes, hard with depth.	0.0	Soil sample collected at 15:30 for VOCs and percent moisture content - sample ID EIP-GP54-03.

End of boring @ 30'.

Well: Piezometer
2" PVC Riser
0.010" Slot Screen

07-13-2004 K:\11515\Ellsworth Industrial Park\Boring Logs\EIP-GP054(28).bor

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP55

Date Completed	: 27 January 2004	Total Depth	: 27' BGS
Drilling Company	: IPS	WESTON Geologist	: Ted Cagney
Drilling Method	: Geoprobe	Location	: 2500 Curtiss
Driller Name	: Ryan Scott		
Borehole Diameter	: 2"		

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Depth in feet	Recovery (in)	GRAPHIC	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS	Well: Piezometer
0–13								2" PVC Riser
13–17	36/48		SW	CLAYEY SAND and GRAVEL; Brown and orange, less clay with depth, coarse grained sand and gravel, slightly moist, some plasticity, decreasing with depth.	VOC Soil Sample Collected	0.0	Soil sample collected at 8:55 for VOCs and percent moisture content - sample ID EIP-GP55-01.	
17–23							Piezometer well screen set from 17 to 27 feet.	0.010" Slot Screen
23–27	36/48		CL	SILTY CLAY; Grey, dry, stiff, very hard, trace gravel.	VOC Soil Sample Collected	0.0	Soil sample collected at 9:10 for VOCs and percent moisture content - sample ID EIP-GP55-02.	

End of boring @ 27'

07-13-2004 K:\1515\Ellsworth Industrial Park\Boring Logs\EIP-GP055(27).bor

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP56

Date Completed	: 27 January 2004		
Drilling Company	: IPS	Total Depth	: 30' BGS
Drilling Method	: Geoprobe	WESTON Geologist	: Ted Cagney
Driller Name	: Ryan Scott	Location	: 2500 Curtiss
Borehole Diameter	: 2"		

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Well: Piezometer

Depth in feet	Recovery (in)	GRAPHIC	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS
2–4	48/48		FL	FILL; Sand and gravel, some clay, brown, and grey, dry, loose, coarse grained sand.			
4–6			CL	SILTY CLAY; Brown to black, dry, stiff, slight organic odor, trace gravel.	VOC Soil Sample Collected	0.0	Soil sample collected at 9:50 for VOCs and percent moisture content - sample ID EIP-GP56-01.
20							Piezometer well screen set from 20 to 30 feet.
24–28	20/48		SW	SAND and GRAVEL; Brown, medium grained, dry, loose.	VOC Soil Sample Collected		Soil sample collected at 10:15 for VOCs and percent moisture content - sample ID EIP-GP56-02.
28				End of boring @ 30'.			

2" PVC Riser

0.010" Slot Screen

07-13-2004 K:\1515\Ellsworth Industrial Park\Boring Logs\EIP-GP056(28).bor

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP57

Date Completed	: 27 January 2004	Total Depth	: 30' BGS
Drilling Company	: IPS	WESTON Geologist	: Ted Cagney
Drilling Method	: Geoprobe	Location	: 2500 Curtiss
Driller Name	: Ryan Scott		
Borehole Diameter	: 2"		

Boring Intervals
- VOC Soil Sample Collected
- Geologic Sample Interval

Well: Piezometer

Depth in feet	Recovery (in)	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS
3–4	30/48	FL	FILL; Sand and gravel, brown, loose and coarse grained sand, dry, well graded gravel.			
4–7		SC	SANDY CLAY; Brown, dry to slightly moist, trace gravel, high plasticity, soft.	VOC Soil Sample Collected	0.0	Soil sample collected at 11:00 for VOCs and percent moisture content - sample ID EIP-GP57-01.
14–15	30/48	SW	SAND and GRAVEL; Brown, dry, loose, coarse grained.			
15–18		SC	SANDY CLAY; Brown, dry, very stiff, trace gravel, hard.	VOC Soil Sample Collected	0.0	Soil sample collected at 11:15 for VOCs and percent moisture content - sample ID EIP-GP57-02.
24						Piezometer well screen set from 20 to 30 feet.

2" PVC Riser

0.010" Slot Screen

End of boring @ 30'

07-13-2004 K:\1515\Ellsworth Industrial Park\Boring Logs\EIP-GP057(18).bor

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP58

Date Completed	: 26 January 2004		
Drilling Company	: IPS	Total Depth	: 30' BGS
Drilling Method	: Geoprobe	WESTON Geologist	: Ted Cagney
Driller Name	: Ryan Scott	Location	: 2500 Curtiss
Borehole Diameter	: 2"		

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Depth in feet	Recovery (in)	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS
0–4	48/48	FL	3" FILL; Asphalt and gravel, black. SILTY SAND; Tan, with gravel, loose, dry. SANDY CLAY; Grey and brown, with gravel, dry to slightly moist.	VOC Soil Sample Collected	0.0	Soil sample collected at 13:18 for VOCs and percent moisture content - sample ID EIP-GP58-01.
5–9	48/48	GW	CLAYEY SAND and GRAVEL, Brown and orange, coarse grained, loose, dry.	VOC Soil Sample Collected	0.0	Soil sample collected at 13:35 for VOCs and percent moisture content - sample ID EIP-GP58-02.
15–19	30/48	SW	SAND and GRAVEL; Orange, coarse grained, dry, loose,.	VOC Soil Sample Collected	0.0	Soil sample collected at 14:10 for VOCs and percent moisture content - sample ID EIP-GP58-03.
25						Piezometer well screen set from 20 to 30 feet.
30			End of boring @ 30'.			

Well: Piezometer

Depth (feet)	Well
0–20	2" PVC Riser
20–30	0.010" Slot Screen

07-13-2004 K:\1515\Ellsworth Industrial Park\Boring Logs\EIP-GP058(19).bor

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP59

Date Completed	: 26 January 2004	Total Depth	: 30' BGS
Drilling Company	: IPS	WESTON Geologist	: Ted Cagney
Drilling Method	: Geoprobe	Location	: 2500 Curtiss
Driller Name	: Ryan Scott		
Borehole Diameter	: 2"		

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Well: Piezometer

Depth in feet	Recovery (in)	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS
0–2	48/48	FL	FILL; Sand with gravel, tan, low plasticity, dry.	VOC Soil Sample Collected	0.0	Soil sample collected at 11:32 for VOCs and percent moisture content - sample ID EIP-GP59-01.
2–4		CL	SILTY CLAY; Brown, trace gravel, dry to slightly moist, soft.			
4–5		SC				
5–8	48/48	SC	SANDY CLAY; Tan and orange, with gravel, dry to slightly moist, stiff.	VOC Soil Sample Collected	0.0	Soil sample collected at 11:37 for VOCs and percent moisture content - sample ID EIP-GP59-02.
12–16	38/48	SP	SAND and GRAVEL; Orange, coarse grained, dry, low plasticity, some large cobbles throughout.	VOC Soil Sample Collected	0.0	Soil sample collected at 11:48 for VOCs and percent moisture content - sample ID EIP-GP59-03.
20–30						Piezometer well screen set from 20 to 30 feet.

End of boring @ 30'.

2" PVC Riser

0.010" Slot Screen

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP60

Date Completed	: 27 January 2004		
Drilling Company	: IPS	Total Depth	: 30' BGS
Drilling Method	: Geoprobe	WESTON Geologist	: Ted Cagney
Driller Name	: Ryan Scott	Location	: 2500 Curtiss
Borehole Diameter	: 2"		

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Well: Piezometer

Depth in feet	Recovery (in)	GRAPHIC	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS
2–4	36/48		FL	FILL; Sandy clay and gravel, brown, slightly moist, moderate plasticity.	VOC sample at 4	0.0	Soil sample collected at 12:00 for VOCs and percent moisture content - sample ID EIP-GP60-01.
4–6			CL	SILTY CLAY; Brown and black, slightly moist, trace gravel.			
8–12	24/48		CL	As above.	VOC sample at 10	0.0	Soil sample collected at 12:10 for VOCs and percent moisture content - sample ID EIP-GP60-02.
14–17	30/48		CL	SILTY CLAY; Black, slightly moist, some gravel, organic odor.	VOC sample at 16	0.0	Soil sample collected at 12:25 for VOCs and percent moisture content - sample ID EIP-GP60-03.
17–18			SW	SAND and GRAVEL; Brown and orange, coarse grained sand, dry, loose.			
20–30							Piezometer well screen set from 20 to 30 feet.

End of boring @ 30'.

2" PVC Riser

0.010" Slot Screen

07-13-2004 K:\1515\Ellsworth Industrial Park\Boring Logs\EIP-GP060(18).bor

RESPONSE ACTION CONTRACT
U.S. EPA CONTRACT No. 68-W7-0026
Work Assignment No. 155-RICO-B51W

Ellsworth Industrial Park Site
Downers Grove, Illinois

LOG OF BORING EIP-GP207

Date Completed	: 26 January 2004	Total Depth	: 30' BGS
Drilling Company	: IPS	WESTON Geologist	: Ted Cagney
Drilling Method	: Geoprobe	Location	: 2500 Curtiss
Driller Name	: Ryan Scott		
Borehole Diameter	: 2"		

Boring Intervals
VOC Soil Sample Collected
Geologic Sample Interval

Well: Piezometer

Depth in feet	Recovery (in)	GRAPHIC	USCS	DESCRIPTION	Boring Intervals	PID (ppm)	REMARKS
1–3	48/48		FL	SILTY CLAY; Black and grey, trace gravel and cobbles, slightly moist, slightly stiff.		0.0	Soil sample collected at 16:00 for VOCs and percent moisture content - sample ID EIP-GP207-01.
3–5			CL	SANDY CLAY; Brown and grey, trace gravel, slightly moist.			
7–8	40/48		CL	SANDY CLAY; Brown, trace gravel, slightly moist.		0.0	Soil sample collected at 16:10 for VOCs and percent moisture content - sample ID EIP-GP207-02.
8–11			SW	SAND and GRAVEL; Brown, coarse grained, trace cobbles, dry, loose.			
15–19	40/48		SW	SAND and GRAVEL; Brown and Orange, coarse grained, dry, loose, trace large cobbles.		0.0	Soil sample collected at 16:25 for VOCs and percent moisture content - sample ID EIP-GP207-03.
20–30							Piezometer well screen set from 20 to 30 feet.

Depth scale: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30

2" PVC Riser

0.010" Slot Screen

End of boring @ 30'.

APPENDIX M

APPENDIX M

HUFF & HUFF, SUPPLEMENTAL SLUDGE LAGOON AND GROUNDWATER SAMPLING REPORT, FEBRUARY 2005 (PARTIAL)

SUPPLEMENTAL SLUDGE LAGOON AND GROUNDWATER SAMPLING REPORT

DOWNERS GROVE SANITARY DISTRICT
2710 CURTISS STREET
DOWNERS GROVE, ILLINOIS

February, 2005

Prepared by

James E. Huff, P.E.
Jeremy Reynolds

HUFF & HUFF, INC.
ENVIRONMENTAL CONSULTANTS
LaGRANGE, ILLINOIS

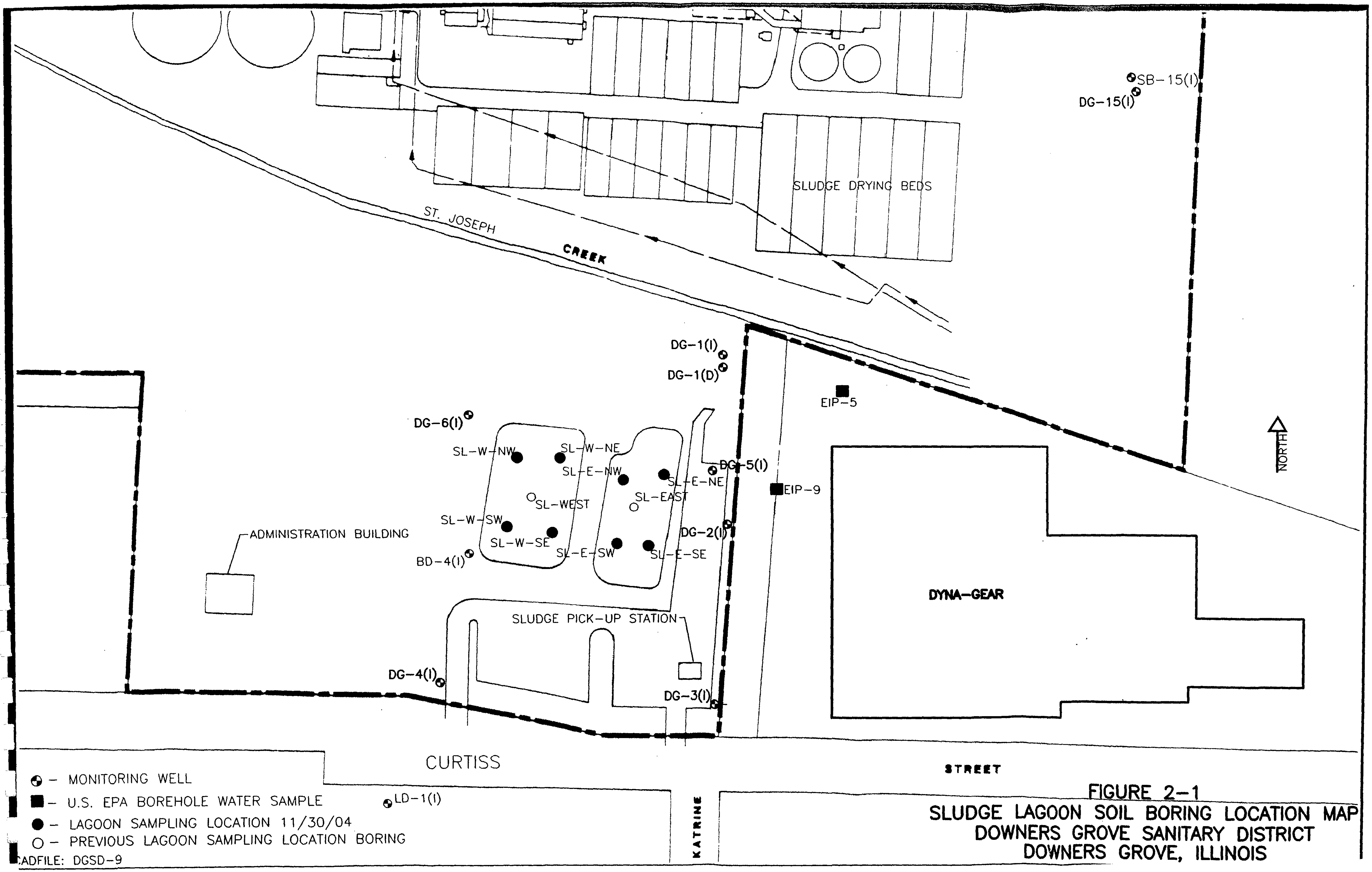


FIGURE 2-1
SLUDGE LAGOON SOIL BORING LOCATION MAP
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, ILLINOIS

TABLE 2-2
DOWNERS GROVE SANITARY DISTRICT
SLUDGE LAGOON SAMPLE RESULTS
CHLORINATED SOLVENTS (VOC Method 5035/8260B)

		mg/kg, dry weight bases						
Soil Boring/Depth, ft	Medium	TCA [a/]	DCA [b/]	1,1-DCE [c/]	PCE [d/]	TCE [e/]	c-1,2--DCE [f/]	VC [g/]
EAST Lagoon Northeast Corner								
0 - 1.0	Sludge	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
1.0 - 2.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2.0 - 3.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3.0 - 4.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4.5 - 6.0	Soil	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
6.0 - 7.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7.5 - 9.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EAST Lagoon Northwest Corner								
0 - 1.0	Sludge	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014
1.0 - 2.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2.0 - 3.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3.0 - 4.5	Soil	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
4.5 - 6.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6.0 - 7.5	Soil	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
7.5 - 9.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EAST Lagoon Southeast Corner								
0 - 1.0	Sludge	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1.0 - 2.0	Soil	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
2.0 - 3.0	Soil	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
3.0 - 4.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4.5 - 6.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6.0 - 7.5	Soil	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
7.5 - 9.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EAST Lagoon Southwest Corner								
0 - 1.0	Sludge	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031
1.0 - 2.0	Sludge	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
2.0 - 3.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3.0 - 4.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4.5 - 6.0	Soil	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
6.0 - 7.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7.5 - 9.0	Soil	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004

[a/] TCA - 1,1,1 Trichloroethane
[b/] DCA - 1,1 Dichloroethane
[c/] 1,1-DCE - 1,1 Dichlorethene
[d/] PCE - Perchlorethene
[e/] TCE - Trichloroethene
[f/] c-1,2-DCE - cis-1,2-Dichloroethene
[g/] VC - Vinyl chloride

TABLE 2-2
DOWNERS GROVE SANITARY DISTRICT
SLUDGE LAGOON SAMPLE RESULTS
CHLORINATED SOLVENTS (VOC Method 5035/8260B)

		mg/kg, dry weight bases						
Soil Boring/Depth, ft	Medium	TCA [a/]	DCA [b/]	1,1-DCE [c/]	PCE [d/]	TCE [e/]	c-1,2--DCE [f/]	VC [g/]
WEST Lagoon Northeast Corner								
0 - 1.0	Sludge	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
1.0 - 2.0	Soil	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
2.0 - 3.0	Soil	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
3.0 - 4.5	Soil	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
4.5 - 6.0	Soil	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
6.0 - 7.5	Soil	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
7.5 - 9.0	Soil	<0.442	<0.442	<0.442	<0.442	<0.442	<0.442	<0.442
WEST Lagoon Northwest Corner								
0 - 1.0	Sludge	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
1.0 - 2.0	Sludge	<0.061	<0.053	<0.076	<0.090 J	<0.068	<0.197	<0.174
2.0 - 3.0	Sludge	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
3.0 - 4.5	Soil	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
4.5 - 6.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6.0 - 7.5	Soil	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
7.5 - 9.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
WEST Lagoon Southeast Corner								
0 - 1.0	Sludge	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034
1.0 - 2.0	Sludge	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
2.0 - 3.0	Soil	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
3.0 - 4.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4.5 - 6.0	Soil	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
6.0 - 7.5	Soil	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
7.5 - 9.0	Soil	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
WEST Lagoon Southwest Corner								
0 - 1.0	Sludge	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
1.0 - 2.0	Sludge	<0.021	<0.019	<0.027	<0.024	<0.024	<0.067	<0.061
2.0 - 3.0	Sludge/Soil	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
3.0 - 4.5	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4.5 - 6.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6.0 - 7.5	Soil	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7.5 - 9.0	Soil	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

[a/] TCA - 1,1,1 Trichloroethane
[b/] DCA - 1,1 Dichloroethane
[c/] 1,1-DCE - 1,1 Dichlorethene
[d/] PCE - Perchlorethene
[e/] TCE - Trichloroethene
[f/] c-1,2-DCE - cis-1,2-Dichloroethene
[g/] VC - Vinyl chloride
J = Analyte Detected Below Quantitation Limits
R:\Downers Gr San Dist\2004\[SludgeLagoonResults-Chlor Solv 11-02&11-04.xls]4 Corners

TABLE 3-2
DOWNERS GROVE SANITARY DISTRICT
MONITORING WELL RESULTS-NOVEMBER 29-30, 2004
Chlorinated VOCs

	mg/L								
Contaminant	DG-1(D)	DG-1(I)	DG-5(I)	DG-2(I)	DG-6(I)	DG-4(I)	DG-3(I)	BD-4(I)	Trip Blank
1,1,1-Trichloroethane (TCA)	<0.0011	<0.0011	<0.0011	**0.0033**	<0.0011	<0.0011	<0.0011	<0.0011	<0.0002
1,1-Dichloroethane (DCA)	<0.0008	<0.0008	<0.0008	**0.0138**	<0.0008	<0.0008	**0.1400**	<0.0008	<0.0002
1,1-Dichloroethylene	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0002
Chloroethane	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0002
Perchloroethylene (PCE)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0004
Trichloroethylene (TCE)	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	**0.0040**	<0.0002
cis-1,2-Dichloroethylene	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	**0.0083**	<0.0011	<0.0002
Vinyl chloride	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0001

a/ Detected compounds bolded

R:\Downers Gr San Dist\[Monitoring Well Sample Results 11-04.xls]Sheet1

APPENDIX N

APPENDIX N

WESTON SOLUTIONS, INC., PRELIMINARY PLANNING REPORT EIP, MARCH 2006 (PARTIAL)

PRELIMINARY PLANNING REPORT
ELLSWORTH INDUSTRIAL PARK SITE
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

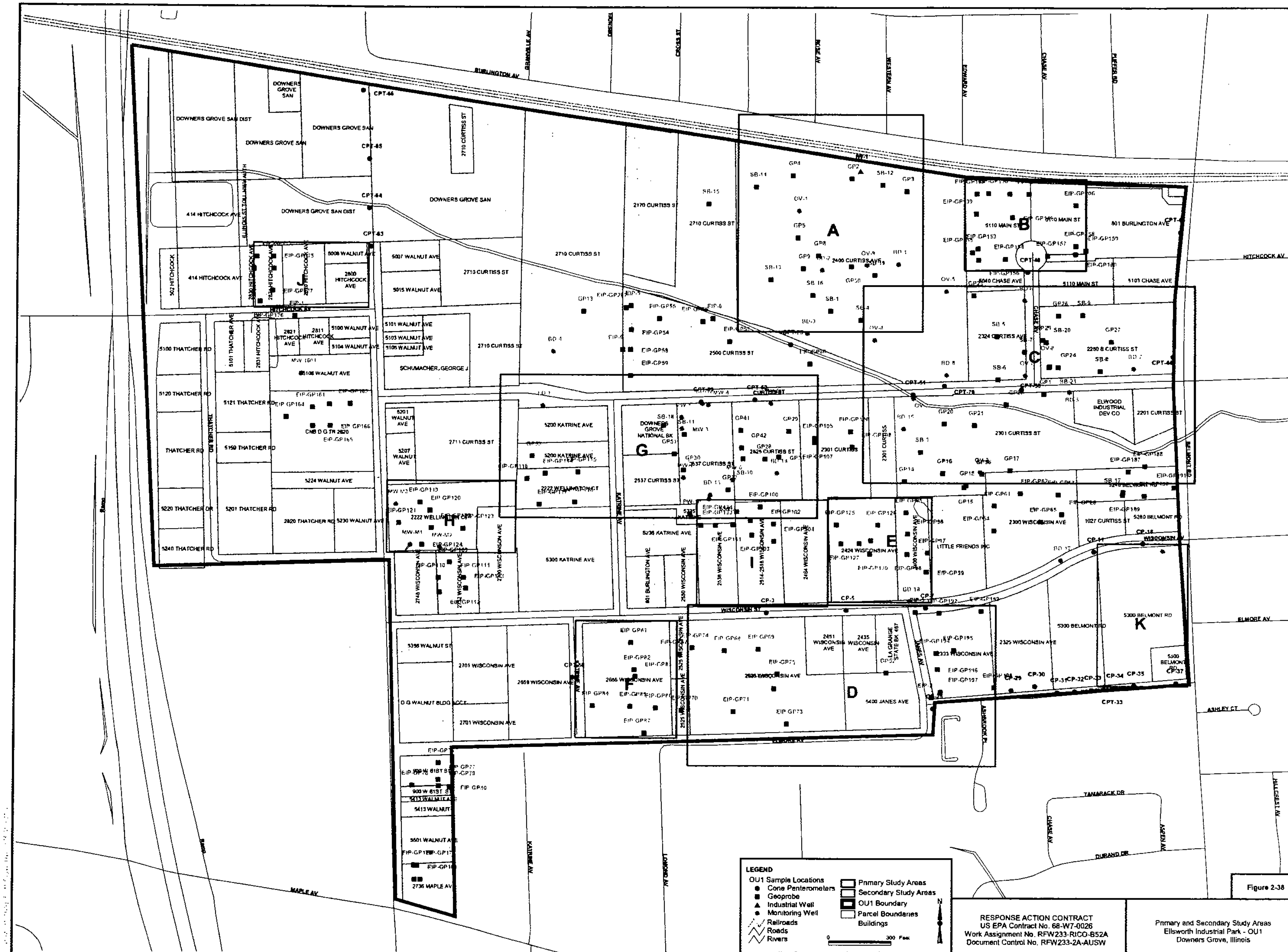
WA No. 233-RICO-B51W
Document Control No. 233-2A-AVBQ
Revision 1 – 31 March 2006

Prepared for

U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Prepared by

WESTON SOLUTIONS, INC.
750 East Bunker Court
Suite 500
Vernon Hills, Illinois 60061


LEGEND
OU1 Sample Locations
Cone Penterometers
Geoprobe
Industrial Well
Monitoring Well
Railroads
Roads
Rivers
Primary Study Areas
Secondary Study Areas
OU1 Boundary
Parcel Boundaries
Buildings
Notes: Base layers obtained from Dupage County - Dec 2005
RESPONSE ACTION CONTRACT
US EPA Contract No. 68-W7-0026
Work Assignment No. RFW233-RICO-B52A
Document Control No. RFW233-2A-AUSW
Figure 2-38
Primary and Secondary Study Areas
Ellsworth Industrial Park - OU1
Downers Grove, Illinois
BURLINGTON AV
HITCHCOCK AV
CURTISS ST
WISCONSIN AV
ELMORE AV
MAPLE AV
A
B
C
D
E
F
G
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APPENDIX O

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WEAVER BOOS CONSULTANTS, FORMER WASTEWATER TREATMENT LAGOONS SITE (PARTIAL) ASSESSMENT, MAY 16, 2006

WEAVER

BOOS

CONSULTANTS

NORTH CENTRAL, LLC

GEO-ENVIRONMENTAL ENGINEERS AND SCIENTISTS

May 16, 2006
Project No. 1894-300-03

Mark D. Erzen, Esq.
Karaganis, White & Magel Ltd.
414 North Orleans Street
Suite 810
Chicago, Illinois

Re: **Former Wastewater Treatment Lagoons Site Assessment**
Downers Grove Sanitary District
2710 Curtiss Street
Downers Grove, Illinois

Dear Mr. Erzen:

Weaver Boos Consultants North Central, LLC (Weaver Boos) prepared this letter to briefly summarize our site assessment concerning the property commonly known as the former wastewater treatment lagoons located on the Downers Grove Sanitary District (DGSD) facility at 2710 Curtiss Street within the Ellsworth Industrial Park in Downers Grove, Illinois (DGSD Property) (see **Figure 1**, attached).

The DGSD Property currently consists of a wooded area located on the north and west sides of the DGSD Property, two former wastewater treatment lagoons previously operated by DGSD, and asphalt-paved areas used by the Village of Downers Grove to store landscaping debris, mulch, and yard waste. Nine groundwater monitoring wells located on the east, west and northwest sides of the former lagoons were installed during prior environmental investigations in 2002 and 2003. Based on our field measurements, the nine monitoring wells range in depths of approximately 33 to 82 feet below ground surface (bgs). St. Joseph Creek lies along the northern boundary with the main DGSD wastewater treatment plant located on the north side of the creek.

Based on historical aerial photographs, the wastewater treatment plant included at least two lagoons located south of St. Joseph Creek, which appeared to have been constructed sometime between 1961 and 1963. Weaver Boos understands that the use of one of the two the former wastewater treatment lagoons was discontinued in the late 1980s and the second was discontinued in the 1990s. Additionally, prior environmental investigations indicated that the lagoons are potentially unlined and were used for dewatering and storage of sludge from the DGSD wastewater treatment plant.

The prior environmental investigations also identified the lagoons as a potential source of contamination due to surficial drainage into the lagoons from areas within the Ellsworth Industrial Park. The prior environmental investigations identified certain solvent compounds in groundwater samples collected from the perimeter of the lagoons at depths of 47 to 57 feet bgs. The prior environmental investigations of the DGSD Property appear to have insufficiently investigated the entire DGSD Property, namely the soil and shallow groundwater (generally at depths less than 40 feet bgs) in the lagoons and on the north and south sides of the lagoons.

Based on the historical documentation, Weaver Boos completed our site assessment consisting of soil and groundwater sampling in an effort to assess the potential environmental impact the historical use has had on the DGSD Property. The following sections briefly summarize our environmental site assessment activities.

Soil Sampling Methodology and Observations

On April 3 and 4, 2006, Weaver Boos advanced four soil probes (WBS-1 through WBS-4) to depths ranging from 25 to 29 feet below ground surface (bgs) in the two former wastewater treatment lagoons (see **Figure 2,** attached). We completed the four soil probes in an effort to assess the condition of soil (generally greater than 10 feet bgs) and shallow groundwater that was not evaluated during prior environmental investigations. Weaver Boos advanced the four soil probes using a track-mounted Geoprobe®.

On April 6 and 7, 2006, Weaver Boos advanced two soil borings to depths of 49 and 54 feet bgs on the north and south sides of the former lagoons (see **Figure 2**, attached) in an effort to assess the condition of the soil at various depths and to evaluate the condition of both the shallow and intermediate groundwater (generally greater than 40 feet bgs and less than 60 feet bgs) depths that were not assessed during prior environmental investigations. Weaver Boos advanced the soil borings using a truck-mounted drill rig equipped with hollow-stem augers.

A summary of the GPS-surveyed probe and boring locations is included in **Attachment A.** Photographs documenting our field activities are included in **Attachment B.**

Upon retrieval of soil samples, Weaver Boos visually classified and logged the soil samples collected from the drilling activities, and a split sample was placed in a separate sample container for organic vapor screening using a calibrated photoionization detector (PID) equipped with an 11.7 electron-volt lamp. The PID provides a qualitative field measurement of organic constituents contained in the sample. **Attachment C** contains the soil logs, which includes the PID readings, for each of the Weaver Boos soil probes and borings. Copies of Weaver Boos' field notes and field logs are included in **Attachment D.**

Based on our observations, the soil in the area of the former lagoons generally consists of organic soil and sand and gravel fill within three feet of the surface overlying silty clay and clay soil with interspersed sand and gravel layers approximately 1 to 17 feet thick. During our drilling activities, Weaver Boos observed no apparent chemical odors or staining on the DGSD Property.

Since prior environmental investigations identified no detectable solvent-type compounds in the entire soil profile in the lagoons to a depth of nine feet bgs, Weaver Boos selected as many as two representative soil samples[1] from each probe or boring at depths greater than nine feet bgs in the lagoon. We collected three representative soil samples from soil boring WBW-1 in an effort to assess the condition of the various soil types encountered.

Weaver Boos collected the soil samples following USEPA[2] Method 5035 sampling protocol. We placed the selected soil samples into preserved laboratory-supplied sample containers, placed the selected soil samples in a cooler packed with ice in an effort to maintain a constant temperature near 4°C, and submitted the samples to a qualified laboratory for volatile organic compounds (VOC) analysis. Upon completion of the soil probes, Weaver Boos abandoned the soil probe borehole by backfilling each probe with granular bentonite to form an expanding low-permeability seal.

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[1] Typically one sample from each soil probe or boring that exhibited the greatest apparent degree of stains, odors, or elevated organic vapor reading as measured with a photoionization detector (PID). However, due to the lack of significant PID readings in the soil probes and borings, Weaver Boos selected the soil sample from each soil probe or boring that would potentially exhibit an impact based on the soil type and location within the soil profile (e.g., coarser-grained soil or at the depth of a confining layer that could potentially impede the migration of solvent compounds).

[2] United States Environmental Protection Agency

Groundwater Sampling Methodology and Observations

Weaver Boos encountered shallow groundwater in two of the four soil probes completed in the former lagoons. Specifically, we encountered groundwater in soil probes WBS-1 and WBS-2 in the silty clay and clay soil at depths of 20 and 19 feet bgs, respectively. We also encountered shallow groundwater in soil borings WBW-1 and WBW-2 advanced on the north and south sides of the former lagoons in silty clay and sandy soil at depths of 27 and 39 feet bgs, respectively.

On April 3 and 4, 2006, Weaver Boos converted the two soil probes to temporary monitoring wells and collected two shallow groundwater samples from the former lagoons. Weaver Boos collected the shallow groundwater screening samples using one-inch diameter polyvinyl chloride (PVC) and a ten-foot section of 0.01-inch slotted screen. After collecting the shallow water samples from the former lagoon, Weaver Boos abandoned the temporary monitoring wells by removing the PVC screen and riser and backfilling each probe with granular bentonite to form an expanding low-permeability seal with the hydrated granular bentonite.

On April 6 and 7, 2006, Weaver Boos collected shallow groundwater samples while drilling soil borings WBW-1 and WBW-2. As soon as the shallow groundwater was encountered during drilling activities, Weaver Boos collected the shallow groundwater screening samples using one-inch diameter PVC and a ten-foot section of 0.01-inch slotted screen prior to advancing the soil boring to its final depth.

After collecting the shallow groundwater samples, Weaver Boos continued the soil borings to the depth of bedrock and converted soil borings WBW-1 and WBW-2 to monitoring wells. We constructed the monitoring wells using 2-inch diameter, 10-foot long, 0.010-inch slot PVC screen with a PVC riser. Weaver Boos sand-packed the well screen with commercially available coarse sand material specifically produced for environmental well installations. We filled the annulus (borehole space from the surface of sand to the ground surface) with bentonite grout underlying bentonite chips and sand and installed a flush-mounted protective steel cover for wellhead protection. The monitoring well construction logs in **Attachment E** graphically depict the well construction.

On April 4, 13, and 17, 2006, Weaver Boos sampled the existing and newly installed monitoring wells, which are screened in various groundwater zones. The two monitoring wells installed by Weaver Boos are screened in the intermediate groundwater zone depth. Based on prior environmental investigations, at least six of the nine previously installed monitoring wells are screened at the depth of the intermediate groundwater zone. One of the nine previously installed groundwater monitoring wells (BD-4(D)) is screened in the deep groundwater zone (generally greater than 60 feet). The remaining two previously installed monitoring wells (DG-1(I) and DG-1(D)), appear to be screened in the shallow and intermediate groundwater zones, respectively, rather than the intermediate and deep zones as indicted in their monitoring well identification.

Prior to sample collection, the monitoring wells were surveyed to an arbitrary 100-foot datum, gauged, developed (WBW-1 and WBW-2 only), allowed to equilibrate at least 48 hours (WBW-1 and WBW-2 only), then purged at least three well volumes of water. A summary of the groundwater elevations is included in **Attachment F**.

Weaver Boos collected the water samples from the temporary and permanent monitoring wells using a low-flow pump and polyethylene tubing with the exception of DG-2(I), DG-3(I), and BD-4(D), which were sampled using a disposable bailer. Weaver Boos also collected two equipment blank water samples by running distilled water through the polyethylene tubing and low-flow pump and the disposable bailer prior to sampling. Weaver Boos placed the water samples into preserved, laboratory-supplied sample containers, placed the samples in a cooler packed with ice in an effort to maintain a constant temperature near 4°C, and submitted the samples to a qualified laboratory for VOC analysis.

Laboratory Analytical Summary

Weaver Boos submitted the selected soil and water samples (13 soil samples and 19 water samples[3]) to STAT Analysis Corporation (STAT) of Chicago, Illinois for analysis using standard chain-of-custody documentation and handling procedures. STAT analyzed the selected soil and water samples for VOCs using USEPA Method 5035/8260B (soil) and USEPA Method 8260B (water) as outlined in *USEPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition.*

The laboratory analyses detected one VOC, namely toluene, in the soil sample collected from soil boring WBW-1, which is not in excess of the TACO Tier 1 soil remediation objective (see **Figure 3**). The laboratory analyses also detected various VOCs[4] in 3 of the 19 water samples analyzed, namely shallow groundwater samples collected from WBS-2 and WBW-2 and

[3] The water samples included two equipment blank samples and two trip blank samples.
[4] Detected VOCs included acetone; 1,1-dichloroethane (1,1 DCA); cis-1,2-dichloroethene (cis 1,2 DCE); trichloroethene (TCE); and vinyl chloride

intermediate groundwater collected from DG-3(I). Of the detected VOCs, the shallow groundwater sample collected from soil boring WBW-2 exhibited an elevated concentration of TCE and the intermediate groundwater sample collected from DG-3(I) exhibited elevated concentrations of 1,1 DCA and vinyl chloride in excess of the TACO Tier 1 Class I groundwater remediation objective (see **Figure 4**, attached). **Tables 1** and **2**, attached, summarize the soil and groundwater results. Copies of the laboratory analytical reports are included in **Attachment G**.

Summary of Findings

Weaver Boos completed four soil probes and two soil borings on the DGSD Property and selected a total of 13 soil samples and 19 water samples for VOC analyses. Weaver Boos observed no apparent chemical odors or staining in the soil probes and borings advanced on the DGPS Property. The laboratory analyses detected one VOC, namely toluene, in 1 of the 13 soil samples analyzed which are not in excess of the TACO Tier 1 soil remediation objectives. Additionally, the laboratory analyses detected various VOCs in 3 of the 19 water samples analyzed, namely shallow groundwater samples collected from WBS-2 and WBW-2 and intermediate groundwater collected from DG-3(I). Of the detected VOCs, the shallow groundwater sample collected from soil boring WBW-2 exhibited an elevated concentration of TCE and the intermediate groundwater sample collected from DG-3(I) exhibited elevated concentrations of 1,1 DCA and vinyl chloride in excess of the TACO Tier 1 Class I groundwater remediation objective.

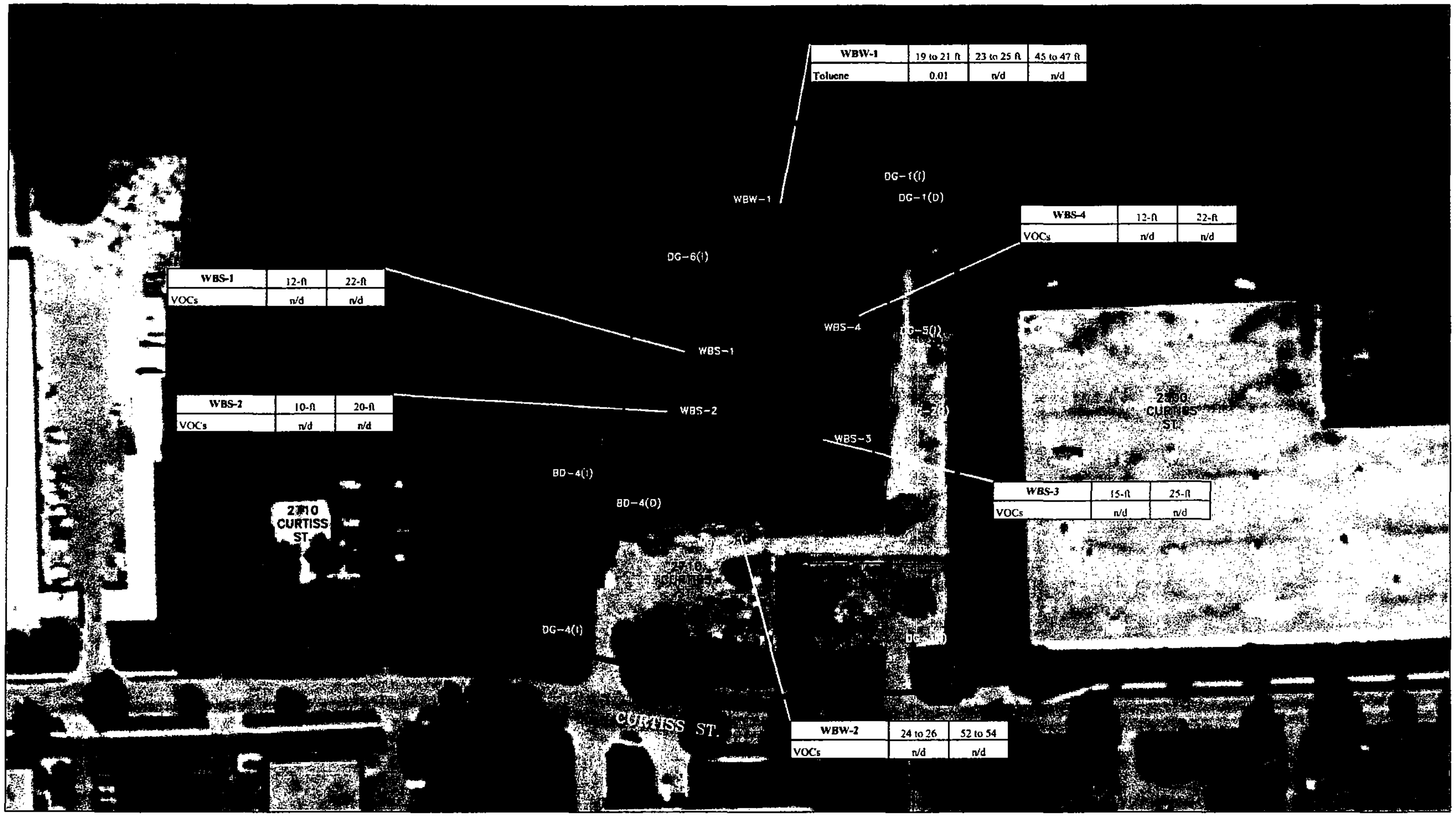
We trust that this information will be sufficient for your needs. If you have any questions, comments, or require any additional information, please do not hesitate to contact us.

Sincerely,

Weaver Boos Consultants North Central, LLC

Carl R. Dawes
Senior Project Manager

Douglas G. Dorgan, Jr., LPG
Principal



LEGEND

WBS-1	APPROXIMATE SOIL PROBE LOCATION (WEAVER BOOS)
WBW-2	APPROXIMATE GROUNDWATER MONITORING WELL LOCATION (WEAVER BOOS)
DG-2(I)	APPROXIMATE GROUNDWATER MONITORING WELL LOCATION (HUFF & HUFF)
BD-4(I)	APPROXIMATE SOIL PROBE LOCATION (USEPA)
0.24	CONCENTRATION DETECTED ABOVE LABORATORY DETECTIVE LIMIT (mg/kg)
n/d	INDICATES LESS THAN LABORATORY DETECTION LIMIT

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE FENCE LOCATION

SCALE

0 50' 100' 200'

SOURCES

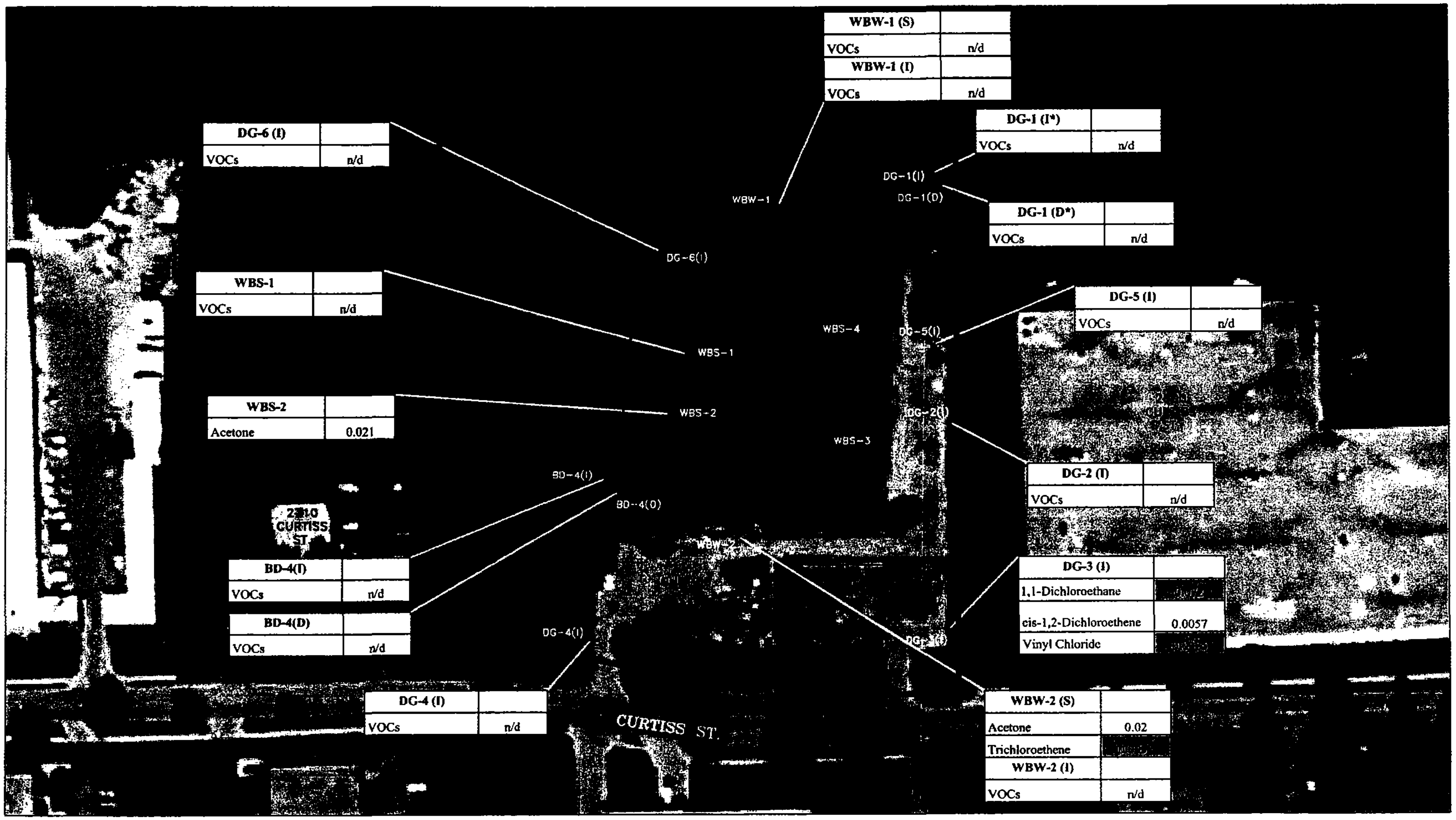
1.) BASE MAP DERIVED FROM DUPAGE COUNTY AREA MAP DATED 12/05.
2.) ALL SOIL PROBE LOCATIONS ARE APPROXIMATE.
3.) WEAVER BOOS SOIL PROBE LOCATIONS WERE LOCATED BY GPS FIELD SURVEY CONDUCTED BY WEAVER BOOS PERSONNEL ON 05/04/06.

SOIL ANALYTICAL SUMMARY
FORMER WASTEWATER TREATMENT LAGOONS

DOWNERS GROVE SANITARY DISTRICT
2710 CURTISS STREET
DOWNERS GROVE, IL

Weaver Boos Consultants
GRIFFITH, IN · FORT WORTH, TX · COLUMBUS, OH
CHICAGO, IL · (312) 922-1030 · SOUTH BEND, IN
NAPERVILLE, IL · SPRINGFIELD, IL · ST. LOUIS, MO

DRAWN BY: CJB	DATE: 05/03/06	FILE: 1894300-03
REVIEWED BY: CRD	CAD:EL0000048.DWG	FIGURE 3



SCALE

0 50' 100' 200'

SOURCES

1.) BASE MAP DERIVED FROM DUPAGE COUNTY AREA MAP DATED 12/05.

2.) ALL SOIL PROBE LOCATIONS ARE APPROXIMATE.

3.) WEAVER BOOS SOIL PROBE LOCATIONS WERE LOCATED BY GPS FIELD SURVEY CONDUCTED BY WEAVER BOOS PERSONNEL ON 05/04/06.

NOTE: WBW-1(S) AND WBW-2(S) CONSIST OF SHALLOW GROUNDWATER SAMPLES (<40-FEET BGS) COLLECTED USING A ONE-INCH DIAMETER, TEN-FOOT LONG PVC SCREEN FROM THE SHALLOW GROUNDWATER DEPTH PRIOR TO ADVANCING THE SOIL BORING TO ITS FINAL DEPTH.

LEGEND

(shaded)	CONCENTRATION EXCEEDS TACO TIER 1 (CLASS I) GROUNDWATER REMEDIATION OBJECTIVES
0.24	CONCENTRATION DETECTED ABOVE LABORATORY DETECTIVE LIMIT (mg/L)
n/d	INDICATES LESS THAN LABORATORY DETECTION LIMIT
(S)	SHALLOW WATER SAMPLE (<40 FEET BELOW GROUND SURFACE).
(I)	INTERMEDIATE MONITORING WELL DEPTH (BETWEEN 40 AND 60 FEET BELOW GROUND SURFACE).
(D)	DEEP MONITORING WELL DEPTH (>60 FEET BELOW GROUND SURFACE).
*	MONITORING WELL DEPTHS FOR DG-1 (I) IS 33.03-FT AND DG-1 (D) IS 45.05-FT. MONITORING WELL DEPTHS ARE MEASURED FROM TOP OF STEEL RISER.
	APPROXIMATE PROPERTY BOUNDARY
	APPROXIMATE FENCE LOCATION
WBS-1	APPROXIMATE SOIL PROBE LOCATION (WEAVER BOOS)
WBW-2	APPROXIMATE GROUNDWATER MONITORING WELL LOCATION (WEAVER BOOS)
DG-2(I)	APPROXIMATE GROUNDWATER MONITORING WELL LOCATION (HUFF & HUFF)
BD-4(I)	APPROXIMATE SOIL PROBE LOCATION (USEPA)

GROUNDWATER ANALYTICAL SUMMARY
FORMER WASTEWATER TREATMENT LAGOONS

DOWNERS GROVE SANITARY DISTRICT
2710 CURTISS STREET
DOWNERS GROVE, IL

Weaver Boos Consultants

GRIFFITH, IN / FORT WORTH, TX / COLUMBUS, OH — CHICAGO, IL (312) 922-1030 SOUTH BEND, IN — NAPERVILLE, IL SPRINGFIELD, IL ST. LOUIS, MO

DRAWN BY: CJB	DATE: 05/03/06	FILE: 1894300-03
REVIEWED BY: CRD	CAD:EL000004C.DWG	FIGURE 4

Table 1
VOCs Soil Analytical Summary
Former Wastewater Treatment Lagoons
Downers Grove Sanitary District
Downers Grove, Illinois

Analyte	Industrial/Commercial[a]		Construction Worker[a]		Soil Component of Groundwater Ingestion[a]		Soil Saturation Limit[b]	Weaver Boos Site Assessment (April 2006)												
								Former Wastewater Treatment Lagoons								North of Former Lagoons			South of Former Lagoons	
	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II		WBS-1[d]	WBS-1	WBS-2	WBS-2	WBS-3	WBS-3	WBS-4	WBS-4	WBW-1	WBW-1	WBW-1	WBW-2	WBW-2
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	12[e]	22	10	20	15	25	12	22	19 to 21	23 to 25	45 to 47	24 to 26	52 to 54
VOCs																				
Acetone	200,000	100,000	200,000	100,000	16	16	100,000	<0.18	<0.11	<0.12	<0.036	<0.05	<0.056	<0.065	<0.047	<0.075	<0.069	<0.052	<0.049	<0.057
Benzene	100	1.6	2,300	2.2	0.03	0.17	870	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Bromodichloromethane	92	3,000	2,000	3,000	0.6	0.6	3,000	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Bromoform	720	100	16,000	140	0.8	0.8	1,900	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Bromomethane	2,900	15	1,000	3.9	0.2	1.2	3,200	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
2-Butanone[c]	1,000,000	25,000	120,000	710	17	17	—	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
Carbon Disulfide	200,000	720	20,000	9.0	32	160	720	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Carbon Tetrachloride	44	0.64	410	0.90	0.07	0.33	1,100	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Chlorobenzene	41,000	210	4,100	1.3	1.0	6.5	680	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Dibromochloromethane	41,000	1,300	41,000	1,300	0.4	0.4	1,300	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Chloroethane[c]	820,000	1,500	82,000	94	15	70	—	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
Chloroform	940	0.54	2,000	0.76	0.6	2.9	2,900	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Chloromethane[c]	8,200	170	820	1.1	0.14	0.68	—	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
1,1-Dichloroethane	200,000	1,700	200,000	130	23	110	1,700	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
1,2-Dichloroethane	63	0.7	1,400	0.99	0.02	0.10	1,800	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
1,1-Dichloroethene	18,000	1,500	1,800	300	0.06	0.30	1,500	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
cis-1,2-Dichloroethene	20,000	1,200	20,000	1,200	0.4	1.1	1,200	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
trans-1,2-Dichloroethene	41,000	3,100	41,000	3,100	0.7	3.4	3,100	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
1,2-Dichloropropane	84	23	1,800	0.50	0.03	0.15	1,100	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
cis-1,3-Dichloropropene	57	2.1	1,200	0.39	0.004	0.02	1,400	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
trans-1,3-Dichloropropene	57	2.1	1,200	0.39	0.004	0.02	1,400	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Ethylbenzene	200,000	400	20,000	58	13	19	400	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
2-Hexanone[c]	82,000	110	8,200	0.72	1.3	1.3	—	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
4-Methyl-2-pentanone	—	—	—	—	—	—	—	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
Methylene Chloride	760	24	12,000	34	0.02	0.2	2,400	<0.036	<0.022	<0.024	<0.0071	<0.01	<0.011	<0.013	<0.0096	<0.015	<0.014	<0.01	<0.0098	<0.011
Methyl tertiary-butyl ether	20,000	8,800	2,000	140	0.32	0.32	8,800	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Styrene	410,000	1,500	41,000	430	4	18	1,500	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
1,1,2,2-Tetrachloroethane[c]	120,000	2,000	12,000	2,000	3.3	3.3	—	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Tetrachloroethene	110	20	2,400	28	0.06	0.3	240	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Toluene	410,000	650	410,000	42	12	29	650	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	0.01	<0.0069	<0.0052	<0.0049	<0.0057
1,1,1-Trichloroethane	—	1,200	—	1,200	2	9.6	1,200	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
1,1,2-Trichloroethane	8,200	1,800	8,200	1,800	0.02	0.3	1,800	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Trichloroethene	520	9	1,200	12	0.06	0.3	1,300	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Vinyl chloride	7.9	1.1	170	1.1	0.01	0.07	1,200	<0.018	<0.011	<0.012	<0.0036	<0.005	<0.0056	<0.0065	<0.0047	<0.0075	<0.0069	<0.0052	<0.0049	<0.0057
Xylenes (total)	1,000,000	320	410,000	320	150	150	320	<0.054	<0.033	<0.036	<0.011	<0.015	<0.017	<0.019	<0.014	<0.023	<0.02	<0.016	<0.015	<0.017

Notes:
[a] Tier I Soil Remediation Objective from Tiered Approach to Corrective Action Objectives (TACO) 35 IAC 742

[b] 35 IAC 742 Appendix A, Table A used to obtain soil saturation limits

[c] Soil remediation objectives as listed in the document entitled *Soil Remediation Objectives for Industrial/Commercial Properties, Non-TACO Chemicals* prepared by the Illinois Environmental Protection Agency Toxicity Assessment Unit dated October 1, 2004

[d] Soil boring identification

[e] Sample collection depth in feet

<0.001 Less than the reported laboratory detection limit

— indicates not listed in TACO Tier 1 Soil Remediation Objectives Tables.

All units in mg/kg except where otherwise noted

0.01 Analyte detected above the laboratory detection limi

Table 2
VOCs Groundwater Analytical Summary
Former Wastewater Treatment Lagoons
Downers Grove Sanitary District
Downers Grove, Illinois

Analyte	TACO Tier 1 Remediation Objective[a]		Weaver Boos Site Assessment (April 2006)																		
	Groundwater Component of Groundwater Ingestion		Former Wastewater Treatment Lagoons		North of Former Lagoons		South of Former Lagoons		Prior Environmental Investigation Monitoring Wells Sampled by Weaver Boos									Weaver Boos Site Assessment Blanks			
	Class I mg/L	Class II mg/L	WBS-1[b]	WBS-2	WBW-1 (S)	WBW-1 (I)	WBW-2 (S)	WBW-2 (I)	DG-1 (I)	DG-1 (D)	DG-2(I)	DG-3(I)	DG-4(I)	DG-5(I)	DG-6(I)	BD-4 (I)	BD-4 (D)	Equipment Blank	Equipment Blank (2)	Trip Blank	Trip Blank (2)
VOCs																					
Acetone	0.7	0.7	< 0.01	0.021	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Bromodichloromethane	0.0002	0.0002	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Bromoform	0.001	0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Bromomethane	0.0098	0.049	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-Butanone	4.2	4.2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon Disulfide	0.7	3.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Carbon Tetrachloride	0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chlorobenzene	0.1	0.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dibromochloromethane	0.14	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloroethane[c]	2.8	14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	0.0002	0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane[c]	0.028	0.14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-Dichloroethane	0.7	3.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.072	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,2-Dichloroethane	0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1-Dichloroethene	0.007	0.035	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
cis-1,2-Dichloroethene	0.07	0.2	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0057	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
trans-1,2-Dichloroethene	0.1	0.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,2-Dichloropropane	0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
cis-1,3-Dichloropropene	0.001	0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	0.001	0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.7	1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
2-Hexanone[c]	0.28	0.28	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-Methyl-2-pentanone	—	—	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Methylene Chloride	0.005	0.050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Methyl tertiary-butyl ether	0.07	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Styrene	0.1	0.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1,2,2-Tetrachloroethane[c]	0.42	0.42	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Tetrachloroethene	0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Toluene	1.0	2.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1,1-Trichloroethane	0.2	1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1,2-Trichloroethane	0.005	0.050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Trichloroethene	0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	0.0057	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.002	0.01	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.0025	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Xylenes (total)	10.0	10.0	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015

Notes:
Monitoring wells DG-1(D), DG-1(I) through DG-6(I), BD-4(I) and BD-4(D) were installed during prior environmental investigations in 2002 and 2003 and resampled during Weaver Boos' April 2006 Site Assessment.

[a] Tier 1 Soil Remediation Objective from Tiered Approach to Corrective Action Objectives (TACO) 35 IAC 742
[b] Sample identification
[c] Groundwater remediation objectives as listed in the document entitled *Groundwater Remediation Objectives for Chemicals Not Listed in TACO* prepared by the Illinois Environmental Protection Agency Toxicity Assessment Unit dated October 1, 2004
<0.001 Less than the reported laboratory detection limit
— indicates not listed in TACO Tier 1 Groundwater Remediation Objectives Tables.
All units in mg/L except where otherwise noted.

0.051 Analyte detected above the laboratory detection limit

0.0087 Concentration exceeds TACO Tier 1 Class I groundwater remediation objective

DOWNERS GROVE SANITARY DISTRICT
FORMER SLUDGE LAGOON GROUNDWATER SAMPLE RESULTS
CHLORINATED SOLVENTS
SPLIT SAMPLING CONDUCTED BY H&H 4/3-13/06

		mg/L						
Sample Location	Media	TCA	DCA	1,1-DCE	PCE	TCE	c-1,2--DCE	VC
DG-1(I)	GW	<0.0011	<0.0008	<0.001	<0.002	<0.0008	<0.0011	<0.0007
DG-1(D)	GW	<0.0011	<0.0008	<0.001	<0.002	<0.0008	<0.0011	<0.0007
DG-2(I)	GW	**0.0022**	**0.0050**	<0.001	<0.002	<0.0008	<0.0011	<0.0007
DG-3(I)	GW	<0.0011	**0.0758**	<0.001	<0.002	<0.0008	**0.0046**	<0.0007
DG-4(I)	GW	<0.0011	<0.0008	<0.001	<0.002	<0.0008	<0.0011	<0.0007
DG-5(I)	GW	<0.0011	<0.0008	<0.001	<0.002	<0.0008	<0.0011	<0.0007
DG-6(I)	GW	<0.0011	<0.0008	<0.001	<0.002	<0.0008	<0.0011	<0.0007
WBW-1	GW	<0.0011	<0.0008	<0.001	<0.002	<0.0008	<0.0011	<0.0007
WBW-2	GW	**0.0056**	<0.0008	<0.001	<0.002	**0.0047**	<0.0011	<0.0007
BD-4(I)	GW	<0.0011	<0.0008	<0.001	<0.002	**0.0050**	<0.0011	<0.0007

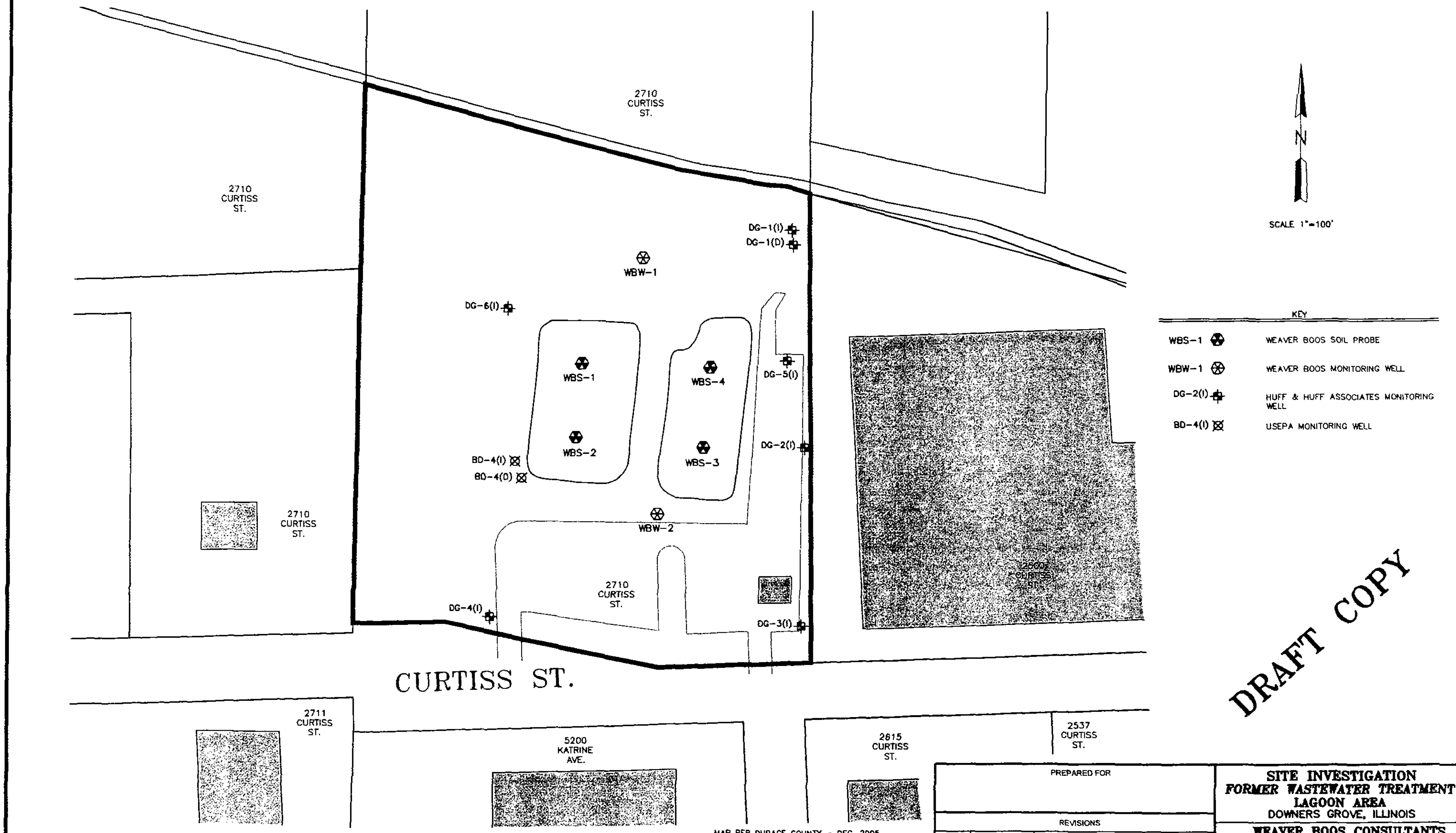
TCA - 1,1,1-Trichloroethane
DCA - 1,1-Dichloroethane
1,1-DCE-1,1-Dichlorethylene
PCE - Perchlorethylene
TCE - Trichloroethylene
c-1,2-DCE - Cis-1,2-dichloroethylene
VC - Vinyl chloride
Bold denotes compounds detected

DOWNERS GROVE SANITARY DISTRICT
FORMER SLUDGE LAGOON SOIL SAMPLE RESULTS
CHLORINATED SOLVENTS (VOC Method 5035/8260B)
SPLIT SAMPLING CONDUCTED BY H&H 4/3-7/06

	mg/Kg, dry weight basis						
Soil Boring/Depth, ft	TCA [a/]	DCA [b/]	1,1-DCE [c/]	PCE [d/]	TCE [e/]	c-1,2--DCE [f/]	VC [g/]
WBS-3	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055

[a/] TCA - 1,1,1 Trichloroethane
[b/] DCA - 1,1 Dichloroethane
[c/] 1,1-DCE - 1,1 Dichlorethene
[d/] PCE - Perchlorethene
[e/] TCE - Trichloroethene
[f/] c-1,2-DCE - cis-1,2-Dichloroethene
[g/] VC - Vinyl chloride

R:\Downers Gr San Dist\DGSD Weaver Boos splits 2006\[DGSD Results WB & H&H.xls]DGSD SOIL



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PREPARED FOR

REVISIONS

NO.	DATE	DESCRIPTION
1.	04/07/06	REVISE LAGOONS
2.	04/11/06	ADD WELLS BY OTHERS

SITE INVESTIGATION
FORMER WASTEWATER TREATMENT LAGOON AREA
DOWNERS GROVE, ILLINOIS

WEAVER BOOS CONSULTANTS

NAPERVILLE, IL (630) 717-4848 | CHICAGO, IL SPRINGFIELD, IL COLUMBUS, OH DENVER, CO | GRIFFITH, IN SOUTH BEND, IN FORT WORTH, TX

DRAWN BY: CPIV	DATE: 02/24/06	FILE: EL000004.DWG
REVIEWED BY: CD	CAD: 1894-300-03-DWG	FIGURE 2

DOWNERS GROVE SLUDGE LAGOON WBS-1
WEST LAGOON NORTH SIDE TEMPORARY WELL
CHLORINATED SOLVENT RESULTS

Date	WB Apr-06 mg/L
1,1,1-Trichloroethane	<0.005
1,1-Dichloroethane	<0.005
1,1,-Dichloroethylene	<0.005
Chloroethane	<0.010
Perchloroethylene	<0.005
Trichloroethylene	<0.005
cis-1,2-Dichloroethylene	<0.005
Vinyl chloride	<0.002

Detected Compounds Bolded
WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]WBS-1

DOWNERS GROVE SLUDGE LAGOON WBS-2
WEST LAGOON SOUTH SIDE TEMPORARY WELL
CHLORINATED SOLVENT RESULTS

Date	WB Apr-06 mg/L
1,1,1-Trichloroethane	<0.005
1,1-Dichloroethane	<0.005
1,1,-Dichloroethylene	<0.005
Chloroethane	<0.010
Perchloroethylene	<0.005
Trichloroethylene	<0.005
cis-1,2-Dichloroethylene	<0.005
Vinyl chloride	<0.002

Detected Compounds Bolded

WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]WBS-2

DOWNERS GROVE TEMPORARY WELLL WBW-1(S)
NORTH OF FORMER SLUDGE LAGOONS
CHLORINATED SOLVENT RESULTS

Date	WB Apr-06 mg/L
1,1,1-Trichloroethane	<0.005
1,1-Dichloroethane	<0.005
1,1,-Dichloroethylene	<0.005
Chloroethane	<0.010
Perchloroethylene	<0.005
Trichloroethylene	<0.005
cis-1,2-Dichloroethylene	<0.005
Vinyl chloride	<0.002

Detected Compounds Bolded
WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]WBW-1(S)

DOWNERS GROVE OVERBURDEN WELL WBW-1(I)
NORTH OF FORMER SLUDGE LAGOONS
CHLORINATED SOLVENT RESULTS

	---mg/L---	
Date	4/13/06 WB	4/13/06 H&H
1,1,1-Trichloroethane	<0.005	<0.0011
1,1-Dichloroethane	<0.005	<0.0008
1,1,-Dichloroethylene	<0.005	<0.001
Chloroethane	<0.010	<0.0008
Perchloroethylene	<0.005	<0.002
Trichloroethylene	<0.005	<0.0008
cis-1,2-Dichloroethylene	<0.005	<0.0011
Vinyl chloride	<0.002	<0.0007

Detected Compounds Bolded

R:\Downers Gr San Dist\[DG Tables.xls]WBW-1(I)

DOWNERS GROVE TEMPORARY WELL WBW-2(S)
SOUTH OF FORMER SLUDGE LAGOONS
CHLORINATED SOLVENT RESULTS

Date	WB Apr-06 mg/L
1,1,1-Trichloroethane	<0.005
1,1-Dichloroethane	<0.005
1,1,-Dichloroethylene	<0.005
Chloroethane	<0.010
Perchloroethylene	<0.005
Trichloroethylene	**0.0057**
cis-1,2-Dichloroethylene	<0.005
Vinyl chloride	<0.002

Detected Compounds Bolded
WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]WBW-2(S)

DOWNERS GROVE OVERBURDEN WELL WBW-2(I)
SOUTH OF FORMER SLUDGE LAGOONS
CHLORINATED SOLVENT RESULTS

	---mg/L---	
Date	4/13/06	4/13/06
	WB	H&H
1,1,1-Trichloroethane	<0.005	**0.0056**
1,1-Dichloroethane	<0.005	<0.0008
1,1,-Dichloroethylene	<0.005	<0.001
Chloroethane	<0.010	<0.0008
Perchloroethylene	<0.005	<0.002
Trichloroethylene	<0.005	**0.0047**
cis-1,2-Dichloroethylene	<0.005	<0.0011
Vinyl chloride	<0.002	<0.0007

Detected Compounds Bolded

R:\Downers Gr San Dist\[DG Tables.xls]WBW-2(I)

DOWNERS GROVE BEDROCK WELL BD-4(D)
BEDROCK WELL
CHLORINATED SOLVENT RESULTS

Date	US EPA 6/18/2002 mg/L	WB Apr-06 mg/L
1,1,1-Trichloroethane	<0.001	<0.005
1,1-Dichloroethane	<0.001	<0.005
1,1,-Dichloroethylene	<0.001	<0.005
Chloroethane	<0.001	<0.010
Perchloroethylene	<0.001	<0.005
Trichloroethylene	<0.001	<0.005
cis-1,2-Dichloroethylene	<0.001	<0.005
Vinyl chloride	<0.001	<0.002

Detected Compounds Bolded
WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]BD-4(D)

DOWNERS GROVE SANITARY DISTRICT OVERBURDEN WELL BD-4(I)
CHLORINATED SOLVENT RESULTS

	mg/L								
Date	6/18/2002 USEPA	9/5/2002	11/12/2002	3/25/2003	6/24/2003	10/23/2003	11/30/2004	4/4/2006 H&H	4/4/2006 WB
1,1,1-Trichloroethane	**0.0012**	<0.0003	<0.0020	**0.0011**	**0.0010**	**0.0011**	<0.0011	<0.0011	<0.005
1,1-Dichloroethane	<0.0010 a/	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0008	<0.0008	<0.005
1,1,-Dichloroethylene	<0.0010	<0.0003	<0.0020	<0.0003	<0.0003	<0.0003	<0.0010	<0.0010	<0.005
Chloroethane	<0.0010	<0.0005	<0.0050	<0.0005	<0.0005	<0.0005	<0.0008	<0.0008	<0.010
Perchloroethylene	**0.0005**	<0.0004	<0.0020	<0.0004	**0.0004**	**0.0021** b/	<0.0020	<0.0020	<0.005
Trichloroethylene	**0.0092**	**0.0053**	**0.0086**	**0.0113**	**0.0090**	**0.0043**	**0.0040**	**0.0050**	<0.005
cis-1,2-Dichloroethylene	<0.0010	<0.0020	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
Vinyl chloride	<0.0010	<0.0004	<0.0002	<0.0004	<0.0004	<0.0004	<0.0007	<0.0007	<0.002

a/Detected Compounds Bolded.

b/ Perchloroethylene also detected in Trip Blank (0.0014 mg/L) and Field Blank (0.0016 mg/L)

WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]BD-4(I)

DOWNERS GROVE OVERBURDEN WELL DG-1(D)
CHLORINATED SOLVENT RESULTS

	--------------------mg/L	--------------	
Date	10/23/03	11/29/2004	4/4/2006 H&H
1,1,1-Trichloroethane	<0.0003	<0.0011	<0.0011
1,1-Dichloroethane	<0.0002	<0.0008	<0.0008
1,1,-Dichloroethylene	<0.0003	<0.0010	<0.0010
Chloroethane	<0.0005	<0.0008	<0.0008
Perchloroethylene	**0.0026** a/	<0.0020	<0.0020
Trichloroethylene	**0.0042 JB**	<0.0008	<0.0008
cis-1,2-Dichloroethylene	<0.0003	<0.0011	<0.0011
Vinyl chloride	<0.0004	<0.0007	<0.0007

Detected Compounds Bolded

B = Analyte detected in associated method blank.

J= Analyte detected below quantitative limits

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L) and

Field Blank (0.0016 mg/L)

WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]DG-1(D)

DOWNERS GROVE OVERBURDEN WELL DG-1(I)
CHLORINATED SOLVENT RESULTS

	mg/L						
Date	11/12/2002	3/25/2003	6/24/2003	10/23/2003	11/29/2004	4/4/2006 H&H	4/4/2006 WB
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
1,1-Dichloroethane	<0.0050	<0.0002	<0.0002	<0.0002	<0.0008	<0.0008	<0.005
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0002	<0.0003	<0.0010	<0.0010	<0.005
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005	<0.0008	<0.0008	<0.010
Perchloroethylene	<0.0030	<0.0004	<0.0004	<0.0004	<0.0020	<0.0020	<0.005
Trichloroethylene	<0.0020	<0.0003	**0.0003 B**	**0.0042 JB**	<0.0008	<0.0008	<0.005
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004	<0.0007	<0.0007	<0.002

Detected Compounds Bolded

B = Analyte detected in associated method blank.

J= Analyte detected below quantitative limits

WB-Weaver Boos Consultants

DOWNERS GROVE OVERBURDEN WELL DG-2(I)
CHLORINATED SOLVENT RESULTS

	mg/L						
Date	11/12/2002	3/25/2003	6/24/2003	10/23/2003	11/29/2004	4/4/2006 H&H	4/4/2006 WB
1,1,1-Trichloroethane	**0.0040**	**0.0047**	**0.0059**	**0.0041**	**0.0033**	**0.0022**	<0.005
1,1-Dichloroethane	**0.0110**	**0.0090**	**0.0228**	**0.0127**	**0.0138**	**0.0050**	<0.005
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0010	<0.0010	<0.005
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005	<0.0008	<0.0008	<0.010
Perchloroethylene	<0.0030	<0.0004	**0.0010 B**	**0.0018** [a/]	<0.0020	<0.0020	<0.005
Trichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0008	<0.0008	<0.005
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004	<0.0007	<0.0007	<0.002

Detected Compounds Bolded

a/Perchloroethyene detected in Trip Blank (0.0014 mg/L and in Field Blank (0.0016 mg/L)

B = Analyte detected in associated method blank.

WB-Weaver Boos Consultants

R:\Downers Gr San Dist\[DG Tables.xls]DG-2(I)

DOWNERS GROVE OVERBURDEN WELL DG-3(I)
CHLORINATED SOLVENT RESULTS

	mg/L						
Date	11/12/2002	3/25/2003	6/24/2003	10/23/2003	11/30/2004	4/4/2006 H&H	4/4/2006 WB
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
1,1-Dichloroethane	<0.0050	**0.0142**	**0.0184**	**0.0089**	**0.1400**	**0.0758**	**0.0720**
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0010	<0.0010	<0.005
Chloroethane	**0.0070**	**0.0057**	**0.0111**	**0.0053**	<0.0008	<0.0008	<0.010
Perchloroethylene	<0.0020	<0.0004	<0.0004	**0.0018** [a/]	<0.0020	<0.0020	<0.005
Trichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0008	<0.0008	<0.005
cis-1,2-Dichloroethylene	<0.0020	<0.0003	**0.0013**	**0.0006**	**0.0083**	**0.0046**	**0.0057**
Vinyl chloride	**0.0020**	**0.0034**	**0.0040**	**0.0033**	<0.0007	<0.0007	**0.0025**

Detected Compounds Bolded

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L) and in Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-3(I)

DOWNERS GROVE OVERBURDEN WELL DG-4(I)
CHLORINATED SOLVENT RESULTS

	mg/L						
Date	11/12/2002	3/25/2003	6/24/2003	10/23/2003	11/30/2004	4/4/2006 H&H	4/4/2006 WB
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
1,1-Dichloroethane	<0.0050	<0.0002	<0.0002	<0.0002	<0.0008	<0.0008	<0.005
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0010	<0.0010	<0.005
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005	<0.0008	<0.0008	<0.010
Perchloroethylene	<0.0020	<0.0004	<0.0004	<0.0004	<0.0020	<0.0020	<0.005
Trichloroethylene	<0.0020	<0.0003	<0.0003	**0.0040** JB	<0.0008	<0.0008	<0.005
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003	<0.0011	<0.0011	<0.005
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004	<0.0007	<0.0007	<0.002

Detected Compounds Bolded

B = Analyte detected in associated method blank.

J= Analyte detected below quantitative limits

WB-Weaver Boos Consutants

R:\Downers Gr San Dist\[DG Tables.xls]DG-4(I)

DOWNERS GROVE SANITARY DISTRICT
OVERBURDEN WELL DG-5(I)
CHLORINATED SOLVENT RESULTS

	mg/L			
Date	10/23/2003	11/29/2004	4/4/2006 H&H	4/5/2006 WB
1,1,1-Trichloroethane	<0.0003	<0.0011	<0.0011	<0.005
1,1-Dichloroethane	<0.0002	<0.0008	<0.0008	<0.005
1,1,-Dichloroethylene	<0.0003	<0.0010	<0.0010	<0.005
Chloroethane	<0.0005	<0.0008	<0.0008	<0.010
Perchloroethylene	**0.0019** [a/, b/]	<0.0020	<0.0020	<0.005
Trichloroethylene	<0.0003	<0.0008	<0.0008	<0.005
cis-1,2-Dichloroethylene	<0.0003	<0.0011	<0.0011	<0.005
Vinyl chloride	<0.0004	<0.0007	<0.0007	<0.002

a/ Detected compounds bolded

b/ Perchloroethylene also detected in Trip Blank (0.0014 mg/L)

and in Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-5(I)

DOWNERS GROVE OVERBURDEN WELL DG-6(I)
CHLORINATED SOLVENT RESULTS

	mg/L	
Date	10/23/2003	11/29/2004
1,1,1-Trichloroethane	<0.0003	<0.0011
1,1-Dichloroethane	<0.0002	<0.0008
1,1,-Dichloroethylene	<0.0003	<0.0010
Chloroethane	<0.0005	<0.0008
Perchloroethylene	**0.0017** [a/]	<0.0020
Trichloroethylene	<0.0003	<0.0008
cis-1,2-Dichloroethylene	<0.0003	<0.0011
Vinyl chloride	<0.0004	<0.0007

a/ Perchloroethylene detected in Trip Blank (0.0014 mg/L)
and Field Blank (0.0016 mg/L)

R:\Downers Gr San Dist\[DG Tables.xls]DG-6(I)

DOWNERS GROVE OVERBURDEN WELL LD-1(I)
CHLORINATED SOLVENT RESULTS

	mg/L			
Date	11/12/2002	3/25/2003	6/24/2003	10/23/03
1,1,1-Trichloroethane	<0.0020	<0.0003	<0.0003	<0.0003
1,1-Dichloroethane	<0.0050	<0.0002	<0.0002	<0.0002
1,1,-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Chloroethane	<0.0050	<0.0005	<0.0005	<0.0005
Perchloroethylene	<0.0030	<0.0004	**0.0011 B**	<0.0004
Trichloroethylene	<0.0020	<0.0003	<0.0003	**0.0042 JB**
cis-1,2-Dichloroethylene	<0.0020	<0.0003	<0.0003	<0.0003
Vinyl chloride	<0.0020	<0.0004	<0.0004	<0.0004

Detected Compounds Bolded
B = Analyte detected in associated method blank.
J= Analyte detected below quantitative limits
Chloroform, chloromethane, methylene chloride
and Perchloroethene detected in trip blank.
Perchloroethene and toluene detected in Field Blank

R:\Downers Gr San Dist\[DG Tables.xls]LD-1(I)

APPENDIX P

APPENDIX P

DEPOSITION OF PHILIP C. BENNETT, MUNIZ MATTER, MAY 8, 2006
(PARTIAL)

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

ANN MUNIZ and ED MUNIZ,	&	
JOSEPH and DIANE SHROKA,	&	
Individually and on Behalf	&	
of All Others Similarly	&	
Situated,	&	No. 1:04-cv-02405
Plaintiffs,	&	Judge John W. Darrah
	&	
v.	&	Magistrate Judge Levin
	&	
REXNORD CORPORATION, et al.,	&	
Defendants/	&	
Third-Party Plaintiffs,	&	
	&	
v.	&	
	&	
CHASE-BELMONT PROPERTIES,	&	
et al.,	&	
Third-Party Defendants	&	

ORAL AND VIDEOTAPED DEPOSITION OF

PHILIP C. BENNETT, PH.D.

VOLUME I
MAY 8, 2006

ORAL AND VIDEOTAPED DEPOSITION OF PHILIP C. BENNETT, PH.D., produced as a witness at the instance of the DEFENDANT, THE MOREY CORPORATION, and duly sworn, was taken in the above-styled and numbered cause on MAY 8, 2006, from 9:18 a.m. to 6:03 p.m., before Aubrea Hendricks, CSR, RPR, in and for the State of Texas, reported by machine shorthand, at the offices of Bracewell & Giuliani, 711 Louisiana Street, Suite 2300, Houston, Texas pursuant to the Federal Rules of Civil Procedure and the provisions stated on the record or attached hereto.

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because I find them to be more effective on the lower data densities.

Q. Did you apply any of those techniques in this instance?

A. I didn't think that they were appropriate in this instance.

Q. Why not?

A. The data density was high enough in the Downers Grove area that -- and plus, I wouldn't -- I wasn't considering the use of statistics for the evaluation anyway, so I wouldn't have -- have a value -- I wouldn't have chosen non-parametric stats over any other stats since I wasn't doing statistical analysis.

Q. I guess that raises the question: What were you doing that didn't require statistical analysis? What was your assignment?

A. My assignment was to look for the sources of the contaminant plume that was identified to exist underneath the Downers Grove class area.

Q. And you didn't believe that statistics would help you answer that question?

A. No.

Q. In your opinion, Dr. Bennett -- and this may be lawyerly -- this may have been lawyered in here, but let me ask. On the bottom of page 2, you say: "I will

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continue to review and analyze the factual material related to this report and I will update my opinions as new data are made available."

A. Yes.

Q. Okay. Have you reviewed any new data since you wrote this report?

A. I received last week data reports of -- from site-specific assessments.

Q. Are you going to update your opinions?

A. I don't know yet. I've only had the briefest time to review the material.

Q. Has there been any other new data made available to you since you wrote your report in -- I guess it was December of 2005 --

A. No.

Q. -- other than this package last week?

A. No.

Q. Do you recall what the package last week related to?

A. There were several -- there was the results of analyses from several properties. I was only able to glance at and retain in memory from two properties.

Q. Okay. They were?

A. The sewage treatment plant, whatever their name is.

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Q. Downers Grove Sanitary District?

A. Sanitary district, thank you. In which I found a whole lot of non-detects and one sample that had an extremely low detect that I'd have to evaluate the QA to see what -- how reliable that low detect was, but that is consistent with my previous opinion that the sanitary district was not a source.

And then I also looked at Fusibond and noticed that there was some soil contamination and that was of interest to me because that was a problematic property in my report.

Q. And there -- were there any other data that you hadn't gotten a chance to look at yet?

A. Yes, and I don't know what was in it.

Q. Okay. Fair enough.

MR. ROBINS, III: Just for the record, we just forwarded him the information that's been recently produced by you and the other -- whoever they were defendants of sampling events, but for the record, we're not intending for him to create new opinions based on that data. It was more for informational purposes so he could be updated.

MR. ERZEN: The only reason why I asked that question is they made me.

THE WITNESS: Ah.

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MR. SAMORE: He's restrained from following up.

MR. ERZEN: Yep.

THE WITNESS: Oh.

Q. I'd like to ask you a question and it kind of goes through most of your contours, but look at -- if you could look at Figure 3 of your report, please, Doctor.

A. (Witness complies.)

Q. And I'll try and describe this for the people on the phone. There's a small green area just -- it looks like it's got a seven in it but it probably isn't really a seven -- on the west side and just to the south of the class area where 350 -- actually where 355 curls down. Do you see that, sir?

A. Yeah.

Q. Okay. It's a small green blob somewhat disconnected from the rest of the --

A. Could you --

Q. -- contour (Indicating.)

A. I see.

Q. And it's actually UTM northing -- it's between 4625500 and 4626000 on the northing and it's between 42 -- excuse me, 412500 and 413000 on the UTM easting.

A. Okay.

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A. The fact that there were no detects along the west boundary.
Q. Okay. And when you say no detects, no detects in -- at what types of sampling?
A. On -- on Figure 3 at the west boundary of the Ellsworth Industrial Park -- I'm sorry, of the class area --
Q. Uh-huh (Affirmative.)
A. -- there is a swath of no detects and there is a separation of these very low detects in that corner, the Region A that you marked on the exhibit.
Q. Uh-huh (Affirmative.)
A. That there were no detects between that and the main EIP plume. And while groundwater does not respect freeways, it does respect hydrologic boundaries. Flow lines don't cross.
Q. Do flow lines sometimes diverge?
A. Yes.
Q. In what circumstances do flow lines diverge into two separate flow?
A. I'm sorry, flow lines -- you used a term hydrogeologically --
Q. Okay.
A. -- that was accurate and then you followed it up with something that was not.

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Q. All right. Let me -- let me stick with it. What is divergence of flow lines in a hydrogeological sense?
A. Divergence of flow lines occur when the hydraulic conductivity decreases.
Q. Okay. Are there ever any circumstances where groundwater flow splits in two? Groundwater will follow one path and other groundwater will follow another path?
A. A hydrologist would say that those were two flow paths, two flow lines.
Q. Okay. Does that ever happen?
A. As I said, the flow lines diverge as hydraulic conductivity decreases.
Q. Yes.
A. And if there is a -- a no flow boundary that is oriented in such a way that one flow line would go on one side of the other of that no flow boundary, that is possible, or a low conductivity boundary.
Q. Kind of like a rock in a stream?
A. Kinda.
Q. (Laughs.) Dr. Bennett, how many times have you been to DuPage County?
A. Once.
Q. And that was the time you talked about where you -- early in the case --

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A. Yes.
Q. -- early in your involvement in the case?
A. Yes.
Q. Are you aware of any statements that U.S. EPA has made about the ability to draw conclusions as to the sources of contamination from the data that the U.S. EPA has on its hands?
A. I'm not aware of a general statement about its ability to draw conclusions.
MR. ERZEN: And Aubrea, I'm not trying to mangle you here.
Q. Dr. Bennett, have you ever talked with anyone from Weston with regard to this case?
A. (Pause.)
Q. Or make it broader, any U.S. EPA contractor?
A. I'm sorry, I was thinking of something else.
Q. That's okay.
A. Okay. No, I've never talked to a contractor from Weston about this project.
Q. Okay. Have you ever talked to anyone from U.S. EPA or IEPA about Ellsworth?
A. No.
Q. Dr. Bennett, did you take any steps to exclude or to explore the possibility that the Downers Grove Sanitary District sewer system is a source of

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contaminants to the bedrock aquifer?
A. I did not take any steps to investigate that, nor did I see any indication in a report that such was a possibility.
Q. In your experience, have sewer lines ever been a source of contamination?
A. Yes. You're speaking generally of contamination?
Q. Yes.
A. Right. Yes.
Q. Do you know where the sewer lines are located in the Ellsworth Industrial Park?
A. No.
Q. Do you know if anyone has taken any steps -- by anyone, either the IEPA or U.S. EPA has taken in -- taken any steps to explore the possibility that influent sewer lines are a source of contamination to the groundwater?
MR. ROBINS, III: Did you say infinite?
MR. ERZEN: Influent--
MR. ROBINS, III: In --
MR. ERZEN: Influent, like the bad stuff.
MR. ROBINS, III: Oh, I thought you said infinite sewer lines.
MR. ERZEN: No, no.

APPENDIX Q

APPENDIX Q

DEPOSITION OF DONALD I. SEIGAL, MUNIZ MATTER, JUNE 1, 2006 (PARTIAL)

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

ANN MUNIZ and ED MUNIZ,
JOSEPH and DIANE SHROKA,
Individually and on Behalf
of All Others Similarly
Situated,
Plaintiffs,

v.

REXNORD CORPORATION, et al.,
Defendants/
Third-Party Plaintiffs,

v.

CHASE-BELMONT PROPERTIES,
et al.,
Third-Party Defendants

No. 1:04-cv-02405
Judge John W. Darrah

Magistrate Judge Levin

ORAL AND VIDEOTAPED DEPOSITION OF

DONALD I. SIEGEL, PH.D.

VOLUME II
JUNE 1, 2006

ORAL AND VIDEOTAPED DEPOSITION OF DONALD I. SIEGEL, PH.D., produced as a witness at the instance of the DEFENDANT, THE MOREY CORPORATION, and duly sworn, was taken in the above-styled and numbered cause on JUNE 1, 2006, from 9:03 a.m. to 4:59 p.m., before Aubrea Hendricks, CSR, RPR, in and for the State of Texas, reported by machine shorthand, at the offices of Sachnoff & Weaver, Ltd., 10 South Wacker Drive, 40th Floor, Chicago, Illinois, pursuant to the Federal Rules of Civil Procedure and the provisions stated on the record or attached hereto.

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Q. Good afternoon, Dr. Siegel. My name is Larry Falbe. I represent the Downers Grove Sanitary District. I have just a handful of questions for you and I'm going to call the Downers Grove Sanitary District the district for short, okay?
A. Fine.
Q. Have you ever visited the district's facility at 2710 Curtiss?
A. No, I have not.
Q. Okay. Have you ever visited -- are you familiar at all with the operations of the district on the -- the former operations on the property that's located east of the industrial park that's now the park district property?
A. Only to the extent that I recently reviewed quickly the consulting report that was -- that I obtained on some new studies there.
Q. Okay. And have you ever visited that property?
A. No, I haven't.
Q. And --
THE VIDEOGRAPHER: Excuse me, sir. Where's your microphone?
MR. FALBE: Oh, I'm sorry. Did you get me?

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THE VIDEOGRAPHER: Yeah, I got you, but it was -- I had to turn it up.
MR. FALBE: Sure.
Q. Doctor, what's your knowledge, if any, regarding the district's operations?
A. I don't know how the district operates.
Q. Okay. Do you have any knowledge regarding the district's use of chlorinated solvents?
A. No, I do not.
Q. Okay. Doctor, you stated yesterday that your report contains all of your opinions in this case with the caveat that you concur with the opinions that Dr. Bennett has offered in his report, correct?
A. That is correct.
Q. Okay. Turning to your expert report, Exhibit No. 1, you do not mention anywhere in your expert report the district, do you?
A. No, I do not.
Q. And you've reviewed Dr. Bennett's report in great detail, correct?
A. I've reviewed it several times, yes.
Q. And you've also reviewed his deposition, right?
A. Yes.
Q. And you would defer to Dr. Bennett as to any opinion he has regarding the specifics as to whether any party in this case is a potential source of contamination?

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A. Yes.
Q. Based on the report and the deposition of Dr. Bennett, he did not identify the district as a source of groundwater contamination in the Ellsworth Industrial Park, did he?
A. No, he did not.
Q. As you sit here today, do you agree with Dr. Bennett?
A. Yes, I do.
Q. And notwithstanding and without waiving our objection to anything you've viewed recently such as Exhibits 4 and 5 which are the newer reports --
A. Yes.
Q. -- is there anything you reviewed recently that changes that opinion?
A. No.
MR. FALBE: That's all I have.
THE VIDEOGRAPHER: Is that it?
MR. FALBE: That's it.
THE VIDEOGRAPHER: 4:05 p.m., we're off the record.
(Off the record.)

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THE VIDEOGRAPHER: 4:06 p.m., we're back on the record.
EXAMINATION
BY MR. HENEGHAN:
Q. Good afternoon, Dr. Siegel.
A. Good afternoon.
Q. My name is Pat Heneghan and I represent RHI Holdings, Inc.
A few moments ago you were asked to do a mathematical calculation that I believe involved your opinion about the elapsed time in terms of years that contaminants -- that it took contaminants to travel from the northern edge of the class area to the southern edge of the class area; is that correct?
A. What I calculated was the time it would take contaminants to move or water to move from the northern edge to the southern edge.
Q. Could you verbally take us through the calculation you performed?
A. What I did was estimate the length of flow path from the northern to southern side of the class action [sic].
Q. And what was that number?
A. I'd estimated about a mile.
Q. 5,280 feet?

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Q. 1,2-TCA not 1,1-TCA?
A. 1,1,2-TCA, yes.
Q. And how much of that concentration of that is there?
A. 18.
Q. Anything between the GP-53 -- I'm sorry, is it 52 or 53?
A. 52.
Q. 52 and the orange area on Figure 3, any other data?
A. I don't see any on this.
Q. Okay. In your calculations and coming to your opinion, you've relied on the data and the information in -- provided by the U.S. EPA and IPA -- IEPA's consultants, correct?
A. That, and also Dr. Bennett's analysis.
Q. Did you review any of the QA/QC documents done -- used by -- or I'm sorry, produced by the IEPA or U.S. EPA consultants?
A. No, I did not.
Q. Is there any reason why you did not?
A. That was not my -- the task I was set to do in this project.
Q. But your opinion relies upon the reliability of that data, correct?

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A. Yes, I -- it does.
Q. Have you calculated the approximate mass of total chlorinated solvents in the commingled plume?
A. No, I have not.
Q. Isn't this a customary calculation when you're trying to determine the strength of source?
A. It can be done.
Q. Is it a customary calculation?
A. I don't know if I'd say it's customary. It's done. I've seen it done.
Q. Why didn't you do it here?
A. Because my objective was to determine whether there are commingled plumes or not coming out of the Ellsworth Industrial Park.
Q. But it is something you could have calculated for this plume?
A. I mentioned I think before in testimony yesterday, I would be -- I would not want to try to calculate it for this plume because we don't have any clear vertical dimensions of contamination within the plume. We're looking at homeowners' wells which were pumped. I'd prefer to do some sort of analysis like that, you know, using a -- I wouldn't use this kind of data set forth.
Q. Is it your opinion that the only source of

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contaminants in the plume is from the Ellsworth Industrial Park?
A. Yes.
Q. Did you look to see whether or not there were any sources of contamination within the class area itself?
A. No, I did not.
Q. Are you aware that PCE is often used in dry cleaning techniques?
A. Yes.
Q. Did you look for any dry cleaning establishments within the class?
A. No.
Q. Did you look into whether any of the class members used any of the solvents as -- to clean their septic system?
A. No.
MR. SHER: Objection, calls for speculation.
Q. So you didn't do any independent research to determine whether anything aside from Ellsworth Industrial Park was a source of the contaminant; isn't that true?
A. No. I --
MR. SHER: Objection, mischaracterizes

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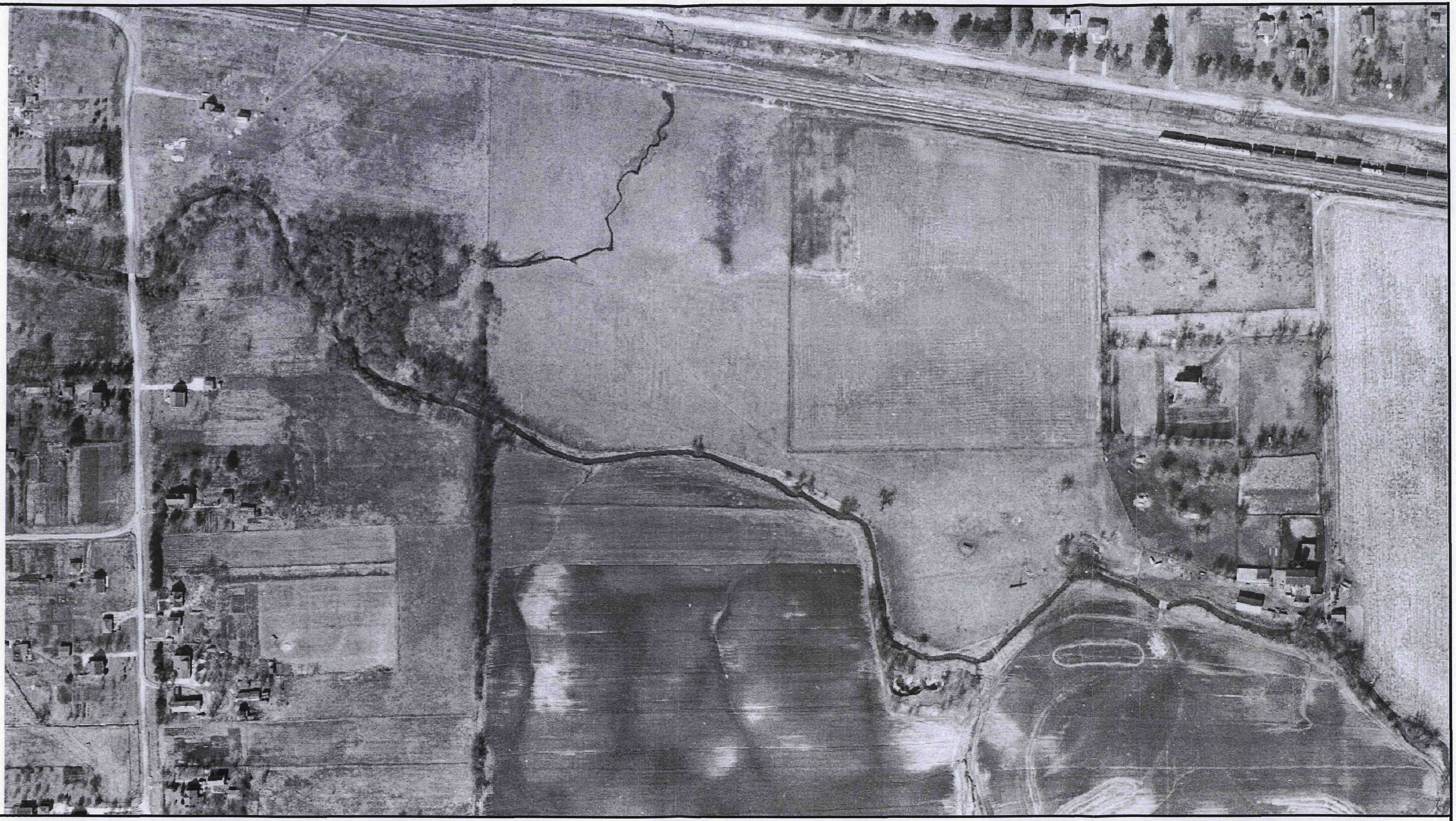
the witness's testimony.
A. I reviewed the documents that addressed issues of contamination outside the industrial park such as the Lockformer facility, potential sources to the north, and the Weston reports discussed and the EPA, most recent EPA report discussed the plausibility of contamination from the east. So in that sense, I did look at other potential sources. I didn't look for potential sources within the class area, the residential area.
Q. And why not?
A. I saw no evidence or I saw no -- I didn't see any evidence that there was any there. That was not --
Q. Well, what did you look at to -- that would have been evidence that there was nothing there?
A. I didn't look for anything within the class act -- class area.
MS. KURTOS: That's all I have. Thank you.
THE VIDEOGRAPHER: 4:00 p.m., we're off the record.
(Off the record.)
THE VIDEOGRAPHER: 4:02 p.m., we're back on the record.
EXAMINATION
BY MR. FALBE:

APPENDIX R

APPENDIX R

HISTORICAL AERIAL PHOTOGRAPHS

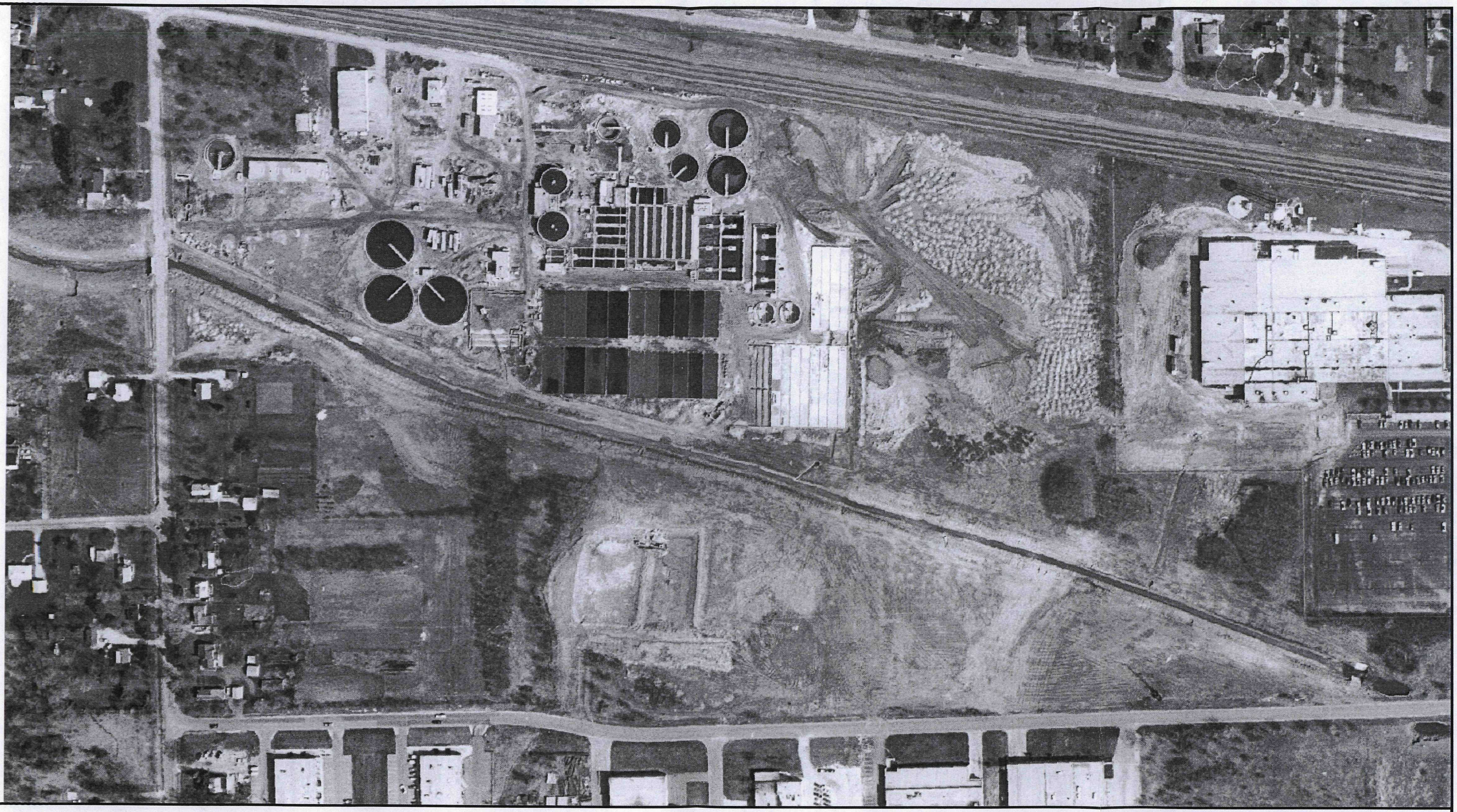


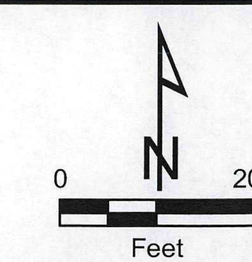
1951 AERIAL PHOTOGRAPH
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

CADFILE: DGSD\51_AERIAL

1961 AERIAL PHOTOGRAPH
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

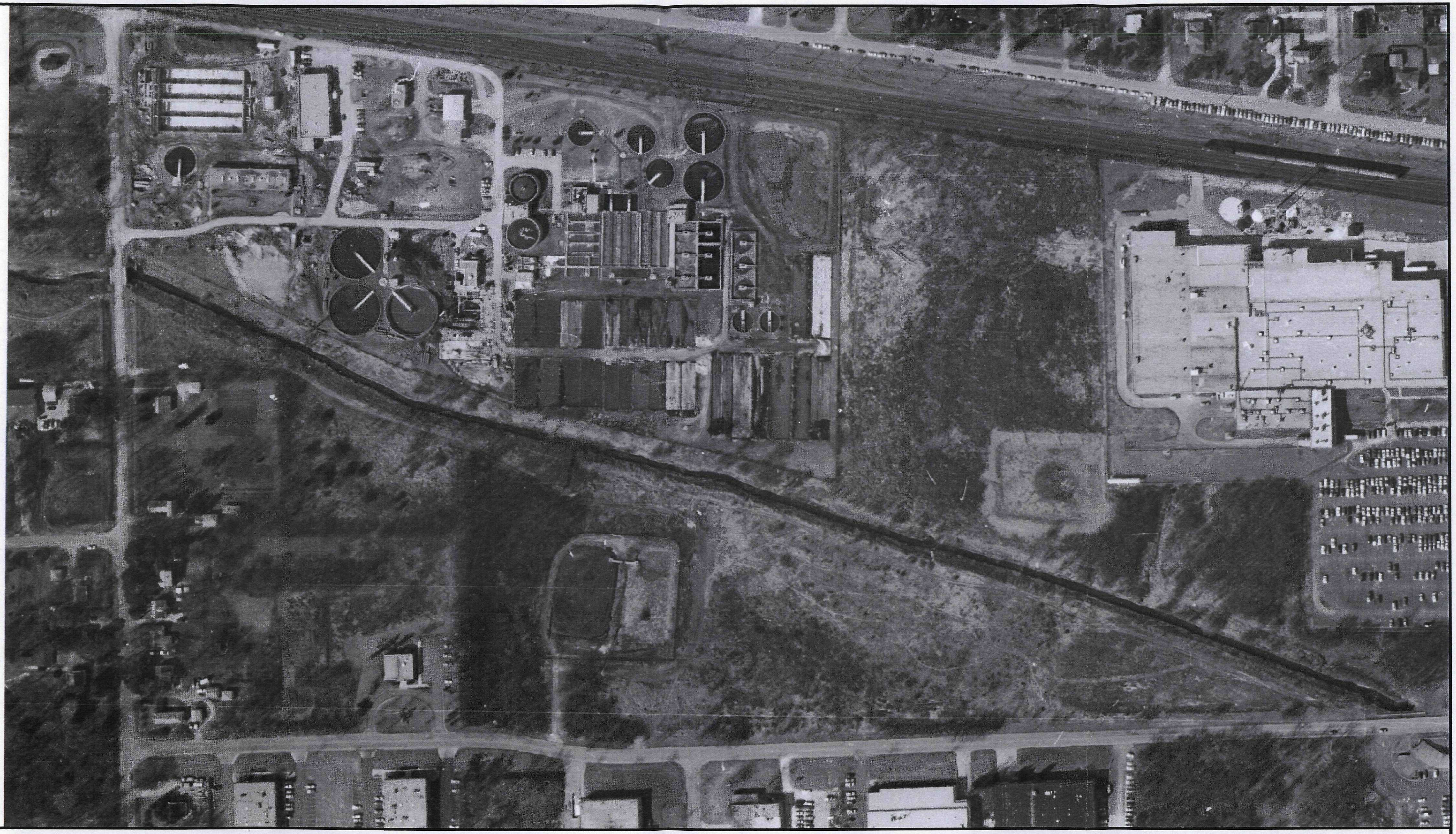
CADFILE: DGSD\61_AERIAL





1975 AERIAL PHOTOGRAPH
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

CADFILE: DGSD\75_AERIAL



1986 AERIAL PHOTOGRAPH
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

CADFILE: DGSD\86_AERIAL

1993 AERIAL PHOTOGRAPH
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

CADFILE: DGSD\93_AERIAL

2005 AERIAL PHOTOGRAPH
DOWNERS GROVE SANITARY DISTRICT
DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS

CADFILE: DGSD\2005_AERIAL